

# The Mining Journal

## RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1373.—VOL. XXXI.

London, Saturday, December 14, 1861.

STAMPED.....SIXPENCE.  
UNSTAMPED..FIVEPENCE.

**M. R. JAMES CROFTS, SHAREBROKER,**  
No. 1, FINCH LANE, CORNHILL. (Established 17 years.)  
The following SHARES are BELOW THEIR REAL VALUE, if to be bought at or  
about the quotations, and quite safe as INVESTMENTS:—  
Bottle Hill, 12s. 6d. 16s. Great Martha, £14. 3s. Old Tolgs Utd., £914. 10.  
Calstock Cons., 5s. 6s. 6d. North Frances, £214. 3s. Long Rake, £14. 3s.  
Dyngwyn (increasing di- North Minera, 20s. 21s. Bryntall, £14. 3s.  
vidends), £10. 11. North Robert, 19s. 21s. North Holmshill, £14. 3s.  
East Martha (£29 paid), Gt. So. Tolgs, £24. 3s. Wheal Edward, £24. 3s.  
£1. 1s. Unity, 14s. 16s. Wh Arthur, 15s. 17s. 6d.  
Wh. Grenville, £14. 3s. Uny, £45. 6s. St. Day United, 10s. 12s.  
Prosper United, £9. 14s.

\* Holders of mining shares DIFFICULT OF SALE in the OPEN MARKET may  
hear of purchasers, and also parties IN ARREAR OF CALLS, or sued by merchants,  
may learn their true legal position and be advised how to act, by applying to Mr. CROFTS.

**M. R. JAMES LANE, No. 44, THREADNEEDLE STREET,**  
LONDON, E.C.

JAMES LANE has FOR SALE, at nett prices:—5 Buller and Bassett, £14. 20 Carn  
Camborne, 19s.; 2 Caradon Consols, £11; 100 Dale, 14s.; 10 East Carn Brea, £914. 20  
East Budnick and Mount, 7s. 6d.; 10 East Caradon, £28; 20 East Russell, £3; 50 Great  
Wheat Martha, 26s.; 50 Gurney, 14s.; 5 Gornavon, £14. 20 Great Retallack, 16s.;  
10 Hingston Down, 22s.; 5 Harriett, 15s.; 50 Lady Bertha, 14s. 6d.; 25 Ludcott, £27. 6s.;  
10 Moyle, £214. 20 Mark Valley, £1014. 20 North Halsabeig, 25s.; 20 North Downs,  
10s. 6d.; 50 North Minera, 22s. 6d.; 10 Penhale Moor, £1; 2 Providence, £24; 20 Red-  
moor, 5s. 6d.; 100 Ribden, 4s. 6d.; 20 Rosewall Hill and Ransom; 50 Sortridge, 15s.;  
5 Seton, £130; 100 Tres Side, 5s. 5 Trelawny, £17; 2 West Rose Down, £11; 20  
Wheat Edward, £3; 10 Wheal Hearn, £18; 5 West Bryn Gwilog, £5; 50 West Silver  
Bank; and 100 Worthington, 11s.

**PETER WATSON, ENGLISH AND FOREIGN STOCK,  
SHARE, AND MINING OFFICES,**  
79, OLD BROAD STREET, LONDON, E.C.

Telegraphic messages to Buy or Sell Railway, Mine, and other Shares and stocks  
punctually attended to on commission, or at nett prices for cash, or for fortnightly settle-  
ments, with advice as to purchases or sales.

Seventeen years' experience (two in Cornwall and fifteen in London).

Bankers: Union Bank of London.

N.B.—There are several dividend mines paying 15 to 25 per cent. on current market  
price, with increasing prospects; also, several progressive mines on the eve of a divi-  
dend-paying state, the shares in which will, no doubt, have a great advance in price.

**ANNUAL MINING REVIEW.—In my "WEEKLY MINING  
CIRCULAR AND SHARE LIST" of Fridays, the 3d, 10th, and 17th January,  
1862, Nos. 197, 198, and 199 (Vol. IV), will be given AN ACCOUNT OF CORNISH,  
DEVON, AND WELSH MINING FOR 1861, with advice as to purchases and sales  
of shares.**

PETER WATSON will visit Cornwall and Devon next or following week.

N.B.—If subscribers and clients will refer to my recommendations during the past  
four months of some dozen mines, they will find that they have advanced considerably,  
as predicted—some from 75 to 400 per cent., whilst others which I state should be sold,  
have since fallen in price.

PETER WATSON, 79, Old Broad-street, E.C.

**SHAREHOLDERS IN ENGLISH AND FOREIGN  
RAILWAYS, MINES, BANKS, DOCKS, AND MISCELLANEOUS SHARES.**

At the urgent request of several London merchants, Stock and Mining Exchange, and  
local Stock Exchange Members, as well as a ready support from my friends and connec-  
tions in different parts of the country, I have been induced to undertake the publication of "The London Daily Record and Share List," which will give the latest prices, and  
sent out every evening to the different parts of the country, which will be in the hands  
of subscribers 12 hours sooner than any of the London daily papers, and which will not  
give so much information as "The London Daily Record and Share List." The growing  
importance and profitable pursuit of the mining interest (especially in Cornwall and Dev-  
onshire Mines), and in which some fifty millions sterling is invested, shows the desir-  
ability of a daily record of prices and closing quotations of all the principal dividend and  
progressive mines. This list, which is published every evening at 5 o'clock, contains  
the transactions in the Stock and Mining Exchanges, English and foreign railways,  
English and foreign mines, joint-stock banks, American railways and securities, docks,  
and miscellaneous shares, price of Consols, dates of fortnightly settling-days, &c. Annual  
subscribers, £1 10s.; single copy, 2d.; by post, £2 2s.—Published by PETER WATSON,  
79, Old Broad-street.

**EAST WHEAL BASSET.—A SPECIAL REPORT on this mine  
(made on Thursday last) appears in PETER WATSON'S "WEEKLY CIR-  
CULAR" of yesterday (Friday), No. 194, vol. IV. Price, 6d.**

79, Old Broad-street, London, E.C.

**WHEAL HARRIETT.—A SPECIAL REPORT next week in  
PETER WATSON'S "WEEKLY CIRCUAR."**

79, Old Broad-street, London, E.C.

**M. R. W. LELEAN, MINE SHAREBROKER,  
11, ROYAL EXCHANGE, LONDON, E.C.**

**RICHARD CLIFF, MINE SHAREDEALER,**  
late of Redruth, now 48, THREADNEEDLE-STREET, LONDON, where all  
letters are to be addressed.

**M. R. T. ROSEWARNE, 75, OLD BROAD  
STREET, LONDON, E.C., has BUSINESS TO TRANACT in—**

Billing, £20. Hingston, £25. Long Rake, £14. 3s. Wheal Norris, £2 7s. 6d.  
Drake Walls, 21s. E. Caradon, £27 18s. 9d. Lady Bertha, 15s. Wheal Edward, £24.  
East Russell, £2 17s. 6d. North Downs, £4 18s. 9d. Wheal Hwy, £2 11s. 3d.  
East Carn Brea, £9 17s. 6d. North Robert, 20s. Wheal Moyle, £24.  
East Grenville, 32s. North Croft, 38s. 6d. Wheal Seton, £28.  
East Devon Cons., £2. Sortridge, 13s. 6d. Wheal Grylls, £14. 3s.  
Gawton, 7s. 6d. Stray Park, £25. West Caradon, £25.  
Herodfoot, £28. So. Wh. Margaret, 7s. Wheal Grylls, £14. 3s.  
And is a BUYER of— West Caradon, £25. North Downs, £25. Wheal Seton. 10  
Clifford Amalgamated. December 13, 1861. West Sharp Tor. 10  
East Carn Brea. December 13, 1861. Bankers: Bank of London.

**M. R. JAMES HUME, SHAREBROKER, 74, OLD BROAD  
STREET, LONDON, E.C.**

THE MINING SHARE MONITOR for December contains SPECIAL INFOR-  
MATION AND REPORTS on WHEAL EDWARD, SETON, EAST CARN BREA, UNY,  
NORRIS, DRAKE WALLS, &c.

Mr. HUME has business to transact in the above mines, as well as all other legitimate  
shares dealt in on the market.

Commission, 1/4 per cent.

**M. R. E. GOMPERS, MINING OFFICES,  
3, CROWN CHAMBERS, THREADNEEDLE STREET, LONDON, E.C.**

BUSINESS TRANSACTED in BRITISH AND FOREIGN STOCKS and SHARES.

Terms, 1/4 per cent.—Bankers: London and Westminster Bank.

**GEOGE RICE, SHAREBROKER, 1, FINCH LANE,  
CORNHILL, BUSINESS TRANSACTED at close prices for cash or account.**

Nett, or 1/4 per cent. commission, for SALE:—

5 Caradon Consols, £10 1/2. Great Retallack, 14s. 6d. 20 Wheal Unity, 14s. 6d.  
10 East Carn Brea, £29. 10 Great Retallack, 14s. 6d. 1 G. Grambler, £19. 3s. 5 Wheal Grylls, £14. 3s.  
5 East Carn Brea, £27. 10 Wheal Unity, 14s. 6d. 5 L. Ludcott, £24. 50 Sortridge, 14s.  
20 East Grenville, 32s. 50 North Minera, 22s. 50 Wheal Edward, £27. 6s. 50 Wheal Grylls, £14. 3s.  
10 Hingston Down, £25. 20 Wheal Emma, 24s. 1 West Caradon, £25. 50 Wheal Grylls, £14. 3s.  
100 Hingston Down—Report: 50 east, £110 per fm.; 60 east, £50 per fm.; and Fawcett's  
lode, £10 per fm.

EAST CARNADON.—These shares have again risen to £28 per share. Looking at the char-  
acter of the lode in the 50 east, and the fall in the standard for copper ores of 3/4, holders  
and others should avail themselves of good advice as to buying and selling at the present  
time.

SPECIAL BUSINESS and ADVICE in all the leading mines.

Advances made on mining shares at moderate rates of interest.

Dec. 13, 1861. Bankers: Bank of London.

**M. R. GEORGE BUDGE, SHAREBROKER, No. 4, ROYAL  
EXCHANGE BUILDINGS, LONDON, E.C. (Established 14 years), has FOR  
SALE 50 West Tolvadden, 2s. 6d.; 3 Wheal Seton, £129; 50 Wheal Edward, £24. 3s.; 2  
East Bassett, £20 1/2; 2 South Frances, £29 1/2; 50 North Minera, 24s.; 100 Great Wheal  
Martha, 26s. 6d.; 100 West Polmear; 100 Ribden, 4s.; 90 Cudden; 120 Great Carnation,  
7s. 6d.; 1 Devon Great Consols; 50 Lady Bertha; 20 Creake, £29 1/2; 60 Dale, 13s. 6d.;  
10 Wheal Hearn; 2 West Caradon; 90 Redmoor, 5s. 6d.; 100 Wheal Arthur, 16s. 6d.;  
3 Providence; 50 East Carn Brea, £29 1/2; 100 East Grenville; 55 Wheal Norris, £2 4s.;  
150 North Nant-y-Mwnt, 2s.; 10 Wheal Grylls; 50 Great Retallack, 16s. 6d.; 25  
Hingston Down, £2 15s.; 20 North Bassett, £25; 5 Stray Park, £25; 50 Wheal Union, £29 1/2;  
3 Trelawny, £21 1/2; 10 Wheal Mary Ann, £17; 50 Buller and Bassett; 2 North Trelawny,  
£29 1/2; 2 Cook's Kitchen, £29; 50 United Mexican.**

Parties who would be induced to buy or sell shares by the recommendations contained  
in circular or advertisements, would do well first to submit their offers to Mr. BUDGE.

**G E O R G E M O O R E,**  
1, CROWN COURT, THREADNEEDLE STREET.

In any business that George Moore is favoured with, in which he is the buyer, he  
will give CASH ON RECEIPT OF TRANSFER.

**JAMES HERRON has FOR SALE the following SHARES, at  
the prices quoted, and FREE OF COMMISSION:—**

10 Alfred Consols, 12s. 2 Herward United, £28 1/2. 1 South Tolgs.  
1 Buller, 1s. 1 Herodfoot, £28. 2 Wh. Frances, £29 1/2.  
10 Boscombe, 19s. 20 Holmshill, £14. 3s. 2 Silver Rake.  
3 Bryn Gwilog, £29. 30 Kelly Bray, 15s. 9d. 2 Trelawny, £16.  
1 Billins, 1s. 50 Lady Bertha, 13s. 9d. 50 Tamar Con., £2 12s.  
10 Bottle Hill, 12s. 6d. 1 Long Rake, £18 17s. 6d. 50 Tincroft, £7 18s. 9d.  
20 Bon Accord, 12s. 6d. 40 Ludcott, £2 10s. 6d. 10 Tolvadden, £29 1/2.  
10 Bryntall, 1s. 40 Moliand, 9d. 20 Trelothew, 26s. 9d.  
10 Cefn Cilicen, 10s. 6d. 50 Tresgarrett, 1s. 20 Wheal Rake.

15 Camborne, 19s. 50 North Minera. 20 Wheal Unity, 13s. 6d.  
2 Cargill, £15. 50 North Bassett, £28 2s. 1 Wheat Seton, £29 1/2.  
1 Cook's Kitchen, £29. 20 North Downs, £47. 1 W. Seton, £2 13s. 6d.  
20 Cudda, 38s. 6d. (includ- 100 Worthing, 11s. 6d.  
ing call). 20 New Frances, 5s. 9d. 2 W. W. Worthington, £10 1/2.  
2 Clifford Amalgamated, 30 New Treleigh, 30s. 20 Wh. Grenville, 29s. 9d.  
£30 1/2. 10 North Rhine, 12s. 20 Wheal Harriet.  
1 Condurrow, 1s. 1 No. Roskear, £19 1/2. 20 Wheal Harriet.  
10 Dale, 13s. 20 North Buller, £2. 20 Wheal Harriet.  
20 Drake Walls, 19s. 9d. 20 North Robert, 20s. 6d. 5 Wheal Edward, £27.  
1 Ding Dong. 30 North Hafod, 10s. 20 West Polmear, 6s. 9d.  
10 East Russell, £2 8s. 6d. 10 North Croft, 39s. 6d. 1 West Sharp Tor.  
10 Great Retallack, 16s. 6d. 20 West Tolcarr, 6s. 6d.  
50 Great Moolwyn (£115s. 20 Wheal Moyle.  
paid), 22s. 20 West South Caradon, 18s. 9d.  
30 Great Crimnus, 18s. 9d. 1 West Caradon, £20 1/2.  
50 Great Martha, 25s. 6d. 5 Wheal Grylls, £14 1/2.  
30 Great Retallack, 14s. 9d. 15 Wheal Heartie.  
50 Great Northern, 28s. 9d. 2 West Bryn Gwilog, £13.  
20 Gt. So. Tolgs, £4 1/2. 20 Rosewarne Utd., £18 15s.  
50 Great Alfred, 8s. 6d. 20 Rosewarne Hill, £2.  
50 Great Moolwyn (£115s. 20 Wheal Seton, 20s.  
paid), 22s. 30 So. Condurrow.  
30 Great Crimnus, 18s. 9d. 1 St. Ives Con., £29 1/2.  
40 Sortridge Cons., 18s. 20 Wheal Seton, 20s.  
50 Great Northern, 28s. 9d. 20 Wheal Norris, £21 1/2.  
20 Gt. So. Tolgs, £4 1/2. 20 Wheal Union, £2 1/2.  
50 Hingston Down, £4. 20 Wheal Bassett, £14 1/2.  
50 Wheal Arthur. 5 Wheal Seton, £2 1/2.  
30 So. Condurrow, 18s. 9d. 20 Wheal Seton, £2 1/2.  
1 St. Ives Con., £29 1/2. 20 Wheal Seton, £2 1/2.  
40 Sortridge Cons., 18s. 20 Wheal Norris, £21 1/2.  
50 Great Northern, 28s. 9d. 20 Wheal Seton, £2 1/2.  
20 St. Day, 10s. 3d. 20 Wheal Seton, £2 1/2.  
5 S. Bryn Gwilog, £5 1/2. 5 Wheal Bassett, £14 1/2.  
30 So. Condurrow, 18s. 9d. 20 Wheal Seton, £2 1/2.  
1 St. Ives Con., £29 1/2. 20 Wheal Seton, £2 1/2.  
40 Sortridge Cons., 18s. 20 Wheal Seton, £2 1/2.  
50 Great Northern, 28s. 9d. 20 Wheal Seton, £2 1/2.  
20 St. Day, 10s. 3d. 20 Wheal Seton, £2 1/2.  
5 Wheal Grylls, £14 1/2. 20 Wheal Seton, £2 1/2.  
30 So. Condurrow, 18s. 9d. 20 Wheal Seton, £2 1/2.  
1 St. Ives Con., £29 1/2. 20 Wheal Seton, £2 1/2.  
40 Sortridge Cons., 18s. 20 Wheal Seton, £2 1/2.  
50 Great Northern, 28s. 9d. 20 Wheal Seton, £2 1/2.  
20 St. Day, 10s. 3d. 20 Wheal Seton, £2 1/2.  
5 Wheal Grylls, £14 1/2. 20 Wheal Seton, £2 1/2.  
30 So. Condurrow, 18s. 9d. 20 Wheal Seton, £2 1/2.  
1 St. Ives Con., £29 1/2. 20 Wheal Seton, £2 1/2.  
40 Sortridge Cons., 18s. 20 Wheal Seton, £2 1/2.  
50 Great Northern, 28s. 9d. 20 Wheal Seton, £2 1/2.  
20 St. Day, 10s. 3d. 20 Wheal Seton, £2 1/2.  
5 Wheal Grylls, £14 1/2. 20 Wheal Seton, £2 1/2.  
30 So. Condurrow, 18s. 9d. 20 Wheal Seton, £2 1/2.  
1 St. Ives Con., £29 1/2. 20 Wheal Seton, £2 1/2.  
40 Sortridge Cons., 18s. 20 Wheal Seton, £2 1/2.  
50 Great Northern, 28s. 9d. 20 Wheal Seton, £2 1/2.  
20 St. Day, 10s. 3d. 20 Wheal Seton, £2 1/2.  
5 Wheal Grylls, £14 1/2. 20 Wheal Seton, £2 1/2.  
30 So. Condurrow, 18s. 9d. 20 Wheal Seton, £2 1/2.  
1 St. Ives Con., £29 1/2. 20 Wheal Seton, £2 1/2.  
40 Sortridge Cons., 18s. 20 Wheal Seton, £2 1/2.  
50 Great Northern, 28s. 9d. 20 Wheal Seton, £2 1/2.  
20 St. Day, 10s. 3d. 20 Wheal Seton, £2 1/2.  
5 Wheal Grylls, £14 1/2. 20 Wheal Seton, £2 1/2.  
30 So. Condurrow, 18s. 9d. 20 Wheal Seton, £2 1/2.  
1 St. Ives Con., £29 1/2. 20 Wheal Seton, £2 1/2.  
40 Sortridge Cons., 18s. 20 Wheal Seton, £2 1/2.  
50 Great Northern, 28s. 9d. 20 Wheal Seton, £2 1/2.  
20 St. Day, 10s. 3d. 20 Wheal Seton, £2 1/2.  
5 Wheal Grylls, £14 1

## Original Correspondence.

## PUMPING WATER FROM DEEP WORKINGS.

THE SYSTEM OF COAL MINING, AS PURSUED IN THE NEWCASTLE DISTRICT.

SIR.—I am sorry the author of the Prize Essay on this subject, published in part in the *Mining Journal* of March 24, 1860, cannot favour "Enquirer" with a view of the particular case therein described of pumping water from deep workings. For this there are two reasons: he is not at present connected with the colliery in question, and the mode described is not now in use in this case. At one of the collieries now under his management a similar mode of pumping water is in operation, the length of wooden spears (pump-rods) is similar, the quantity of water greater, the level is much less, only about one-half, and the water is raised by one lift instead of two. The engine is self-contained, double-cylindred and horizontal; diameter of cylinders, 11 inches; length of stroke, 2 feet; the pump-rods are on the second motion; the strokes of the engine to that of the spears being as 5 to 3; the length of the stroke of the spears at the engine is 2 ft. 4 in. The boiler is placed on the surface, the steam being conveyed in pipes, 277 ft. of 7-in. pipes, which supply two engines, and t. 274 ft. of 5-in. pipes, the engine being at this distance from the foot of the shaft; the total length the steam is conveyed being 551 feet. These are flanged-pipes, with turned fans and India-rubber rings in the joinings; they are in 9-ft. lengths. The steam is exhausted through 7-in. pipes, 300 ft. to the bottom of the shaft; these are also in 9 ft. lengths, spigot and fawcet joints, made tight with patent cement. The whole of these pipes within the mine are embedded in a wall of masonry, which prevents cooling of the pipes, and consequent condensation of steam, and also keeps the driftway in which they are placed sufficiently cool to prevent its destruction. Before entering the engine the steam is passed through a receiver 9 ft. 3 in. long by 3 ft. 6 in. diameter. The pressure of the steam in the boiler is 35 lbs., and it is but slightly, if any, reduced at the engine, although there is a condensation of steam, a greater amount of steam being used to maintain the pressure at the engine thus placed than if the boilers were nearer. The pumping-spears are of good Memel fir, the total length being 2434.5 ft.; they are each 18 ft. in length. From the engine 600 ft. are 4 in. by 4.5 in., the remainder being 5 in. by 3 in.; they are joined in the usual way, by iron spear-plates. They are supported on cast-iron rollers, 4 in. diameter and 4 in. long, and 18 ft. apart, suspended on cast-iron brackets. The line of the spears is not perfectly straight, nor is the inclination uniform, but sufficiently so to have only straight joinings. I may state, as a matter of opinion, that I do not see the least difficulty in passing angles with proper quadrants. With the rollers properly attended to, and the spears not exceeding 30 complete strokes per minute, the spears work quietly, steadily, and smoothly, requiring slight attention or repairs. With a quicker motion, especially at the point of striking the water down, if any of the supports fail, the spears immediately yield. There are two vertical forcing-pumps, the plungers being connected with a short metal beam, to the centre of which the spears are attached by a quadrant, so that one pump is forcing with the in-going stroke and the other with the out-going stroke of the spears, making 40 strokes per minute of the pumps. The plungers are 7.75 in. diameter, stroke 30 in., giving the water discharged by one pump, 5.1 imperial gallons, which, for 40 strokes per minute, is 204 imperial gallons per minute. The pipes from the pump to the delivery are in 9-foot lengths, 7 in. diameter, spigot and fawcet joints made water-tight with lead; their total length is 2002.5 feet. The pipes from the pump to the sump are also in 9-ft. lengths, 7 in. diameter, flanged joints, with turned faces and India-rubber rings, and are 556.5 ft. in length. The height the water is raised from the sump to the delivery is 40 ft., and the total length of pipes is 2559 feet, or 853 yards.

It will thus be seen that this pump, under these circumstances, is equal to about 200 gallons per minute. It is kept nearly constantly at work day and night, and we estimate the quantity of water pumped at an average of 150 gallons a minute over the whole day. Indeed, nearly the whole feeder of water of the colliery is thus raised to the pumping-shaft, which is situated to the rise of the present workings of the colliery. This quantity, 150 gallons per minute, gives the weight of water thus raised per day about 982 tons, which is fully twice the weight of coals raised in a day of 12 hours, or rather more than the weight raised in that time. The cost per ton of water is about one-fifth of a penny, exclusive of the value of coals consumed, or interest on the capital invested in the erection of the machinery, &c. With twice the level to be raised, or 80 ft. instead of 40 ft., the same appliances could easily pump half the quantity of water by placing one of the pumps at half the distance, and working with two lifts instead of one. The whole of the workings of the colliery being dependent on the pumping arrangement, and having only a margin of 50 gallons a minute, and a probability of an increased quantity of water, we placed, some months ago, an auxiliary pump in the same situation, which is worked with the wire-ropes of the underground hauling engine; and, as it affords an unusual opportunity of comparison, I add its description and the results produced. The engine is double cylindred, horizontal, and self-contained, and is used for bringing the coals from the same district from which the water is pumped to the coal shaft. The cylinders are 12 in. diameter, with a 2-ft. stroke. The rope-rolls are 4.5 ft. diameter, on the second motion in the ratio of 5 to 3. The steam is conveyed a total distance of 721 ft., in a similar manner to the pumping-engine, and is exhausted 400 ft., along 7-in. pipes, into the shaft. The inclination of the road varies from rising 1 in 72 to horizontal, and then dipping to a maximum of 1 in 48, necessitating the use of a tail rope, the trains being to drag in both directions. These ropes are applied to the pumping, by passing over a vertical wheel of special construction, at the in end of the engine-plane, the tail rope, which so passes around the sheave, being 2.5 in. circumference, and weighing 5 lbs. per fm. The distance from the engine to the pumping-sheave being 1084.5 yards, the tail rope is supported by sheaves 24 ft. apart, hung on metal brackets. The pumping-wheel is, as I have said, of special construction; the rope groove instead of being rounded, as is usual, is an inverted acute-angled triangle, forming a groove of similar form to the letter V, hence we call it a V-sheave. The diameter of the wheel is 4 ft. 8 in. to 6 ft., according to the size of rope used. It will be seen that in a sheave of this form the rope cannot reach the bottom of the sheave, but is acted on by the semi-circumference of the sheave as a wedge of this length, the result being that the rope will rather break than slip or surge; thus it communicates a motion and power to the pumping-sheave equal to the strength of the rope or the power of the engine.

The pump is a horizontal, double-acting, single-barreled force-pump, connected with the crank on the shaft of the pump sheave. The diameter of the barrel is 6 in.; stroke, 18 in.; water per stroke, 1.83 imperial gallons; strokes 60 double, or 120 per minute; water pumped, 219.6 imperial gallons per minute. The pipes are 4 in. in diameter, and 9 ft. long, with wedged spigot and fawcet joints; their total length is 741 yards, and the water is raised 40 ft., the same as with the wooden spears. As I have already said, this engine is used for raising the coals up a plane, the inclination of which varies from horizontal to dipping 1 in 48 against the load, and for a short distance dipping 1 in 72 in favour of the load. The engine drags 26 tubs, containing about 10 tons of coals, by each train outwards, and 26 tubs inwards when reversed, only operating in one direction at one time. The total number of trains per day is about 40, and the time occupied in running each, exclusive of stops, does not exceed 8 minutes, for 1084.5 x 2 = 2169 yards, which gives about 442 double, or 884 strokes, or at the rate of 110 strokes, pumping 1.83 gallons, or 201.3 gallons per minute while drawing coals, whilst in work; but as the actual coal drawing up the plane does not occupy more than half of the 12 hours, the pumping of water during coal working may be taken as averaging 100 gallons per minute. The engine is perfectly competent to this; indeed, it is surprising how little increased labour seems to be thrown on the engine in addition to drawing the coals. Having had the same plan adopted in several instances in connection with the running of the trains of coals, I find it to answer well, and can confidently recommend its adoption where the quantity of water is such that the running of the ordinary trains of coals produces a sufficient number of strokes for its extraction.

The size of pipes in the two cases is also worthy of notice. With the slow motion required for the wooden spears a 7-in. pipe is used; with the wire-ropes pump an equal quantity of water is raised per minute with a 4-in. pipe. Taking the quantity of water in each case at 260 gallons per minute, the velocity in the 7-in. pipes will be 119 ft. per minute, and in the 4-inch pipe 367 ft. per minute. To produce these velocities a head of water would be required equal to 38 ft. with 7-in. pipes, and equal to 80 ft. with 4-in. pipes; the water being raised only 40 ft. perpendicular, the friction at the velocity given makes the comparative vertical heights equal to 78 and 120 ft. respectively. The circumstances are such that I will have an opportunity to test this shortly, which I will not fail to do. I might add, the effect of the sheave herein described is not at all injurious to the rope;

and also that in a case of continuous pumping a similar sheave might be attached to the engine, and the pump might be worked with an endless rope.

I have, to the best of my judgment, given a complete description of the two plans of pumping water from deep works, as practised at this colliery, and, indeed, generally in this district. I hope it will sufficiently answer the queries of "Enquirer," as asked in the *Mining Journal* of Nov. 30. I shall also be very glad to afford him an opportunity of personally inspecting the two modes in ordinary working.—Dec. 10. M. E.

P.S.—My attention has been directed to an advertisement for a situation, signed "M. E." I beg to state it is not the author of these papers.

## PREVENTION OF ACCIDENTS IN SHAFTS.

SIR.—As the last-published reports of the Government Inspectors of Coal Mines showed that a large number of deaths resulted from accidents in shafts, all propositions for diminishing the number should be cheerfully adopted. Our greatest inventors owe their success to the simplicity of their inventions, but unfortunately it is sometimes difficult to get the most simple, efficient, and inexpensive contrivances for saving life adopted by colliery owners. I hope that Mr. J. P. Baker, the indefatigable Inspector who watches over this district, will, from his position, be able to secure the general introduction of his valuable little invention for preventing falls out of skips in all South Staffordshire mines.

All who have had experience amongst the mines of South Staffordshire must be well aware that colliers are not more temperate than others, and should a man present himself at the mouth of the pit he may, although far from being inebriated, have so much of his previous debauch remaining upon him that he would be very liable to turn giddy when dropped through space at the rate of 20 miles an hour. In the case of poor Thomas Mills it may be inferred that he was quite sober when the accident occurred to him; but men are sometimes subject to epileptic fits, giddiness from constitutional weakness, and to various other maladies rendering falling in the skip possible. I fear, however, that intemperance is but too often the cause of shaft accidents, and as "example is better than precept" I am glad to learn that Mr. Baker is the first to propose a remedy, which makes it impossible to fall from a skip. From the skip-chain or rope he suggests smaller chains to be fastened, which are to be passed round the bodies of the workmen, so that even should they fall, they would remain suspended by the chain. If Mr. Baker would state through the Journal the cost of the apparatus and the mode of attaching it, he would confer permanent benefit upon the mining community of his district. R. J. PHILLIPS.

Dudley, Dec. 9.

## COLLIERY MANAGEMENT—VENTILATION.

MANCHESTER GEOLOGICAL SOCIETY.

SIR.—Permit me to offer my warmest thanks to those correspondents who have kindly referred to the subject of my reading a paper before the Manchester Geological Society. Your correspondent, "M. E.," so far agrees with me on the subject of ventilation of mines that I should be most unwilling to enter into discussion with him on the points of difference that appear to exist between us, for the whole of his remarks bear the impress of a mind that labours for the purpose of disseminating knowledge, and removing the evils which alike exercise their ill effect upon both employers and employed in this important branch of our national industry. So far as the object of our labours extend we are, then, perfectly agreed. My style of dealing with the question is evidently somewhat different from that of most who have written upon the subject; but who can say that that has not been occasioned by the opportunities and facilities which have been afforded me of seeing and tracing out the causes of many of the so-called accidents to the reckless and defective management of mines? With regard to the sneering remarks of a contemporary, referred to by your correspondent, "M. E.," I can only observe that I rather sympathised with the unfortunate position of the gentleman who was called upon to pen the article in question than blamed him; for my sympathies have always been extended to those who are in a state of bondage. Prior to delivering a lecture, or writing a single line for the public upon this important subject, I well considered over the storm of opposition and the torrent of abuse that would in all probability assail me, having previously discerned that the advocacy of the most dangerous principles had less effect upon those who are governed by a short-sighted policy than the simple narration of facts, if they were supposed to run counter to their own immediate interests. However, I so far fortified myself against such attacks that I question whether any one could be found who would devote their time to abusing me, if they could only see the slight effect produced by such efforts. Possessed of a strong constitution, and caring not for either physical or mental labour, I yet hope to do some slight good, and contribute in some degree to the advancement of the interest of both employers and employed in that branch of industry which it has been my lot to labour in. I am not vain enough to expect that any great or rapid changes will be wrought in the management of the collieries of this country, or that anything which may be done by me alone will have the effect of ameliorating the condition of the miner, and affording to the capitalist greater security in his hitherto hazardous undertakings. But I do entertain the most earnest conviction that before long the subject will receive that attention it deserves, and that changes will be effected at no very distant period which will realise my fullest expectations.

Jos. GOODWIN.

## VENTILATION OF COAL MINES.

SIR.—On perusal of the *Mining Journal* of Nov. 30 and Dec. 7 I find the ventilation of coal mines once more before the public. With your permission, I beg to introduce my system of ventilation, in the hope that some practical gentlemen will take the trouble to investigate its merits. Its simplicity and working details are so obvious and astounding that it ought at once to arrest the attention of all connected with coal mines. I have experimented before several scientific gentlemen, colliery proprietors, viewers, and working colliers in this part; they and all say that if my plan were introduced it would revolutionise the present imperfect and expensive system of ventilation. I have tried in vain to introduce it to the notice of men who ought to be first and foremost in finding out a remedy for the wholesale destruction of life. I have seen and written to the Government Inspector of Mines for this district. Though he has not been to see it, he admits my views to be correct, and that by my plan an unerring law of Nature is put into operation. All I require is that a few practical gentlemen should thoroughly test the merits of my invention, for I feel fully convinced that once investigated by them it would lead to practical results. My plan is as follows:—I can remove the inflammable gas from the goafs or reservoirs in any part of the mine out to the surface of the pit, in its pure state, without interfering with the present system of ventilation, no matter how large the quantity or what height it is in the mine, by means of a series of pipes introduced into the said goafs or reservoirs of gas, and by exhausting the atmospheric air out of the said pipes, the gas will flow by its own levity into the open air, thereby removing the dangerous compound from the mine. Blaenavon Gas and Waterworks, Dec. 10. J. G. WILLIAMS.

## COLLIERY VENTILATION.

SIR.—I have read with much gratification the letter of your able correspondent, "M. E.," in last week's *Journal*, and have no hesitation in saying that if all M. E.'s evinced an equally liberal spirit, the inventors of really useful contrivances would meet with more encouragement, and the object which all connected with the working of collieries—safety for the workman—have in view would be more speedily attained. "M. E." very truly remarks that mechanical ventilation is, at most, only in its childhood ere it reaches manhood, and I am sure that everyone will share with him in the hope to see it developed to gigantic proportions; for though, from the difficulty which has existed in finding a reliable mechanical ventilator, the furnace has had the preference with most practical men, it seems so plausible to argue that enormous fires should not be kept up in an explosive atmosphere, that I believe ultimately mechanical ventilation will be universal, and furnace ventilation abandoned. Nothing can be more valuable than the advice of "M. E." for writers, and all who think they can do good to give their ideas to the world, in order that their accuracy may be tested; if erroneous contradicted, and if correct received.

As most of your readers are aware, I have proposed a system of ventilation directly opposed to the existing practice, inasmuch as the air is forced into the mine instead of being drawn out, by which I contend many advantages are gained, not the least, perhaps, being that there is no tendency to further deteriorate the air by drawing foul gas from fissures, &c., in larger quantities than it would be given off naturally. Mr. Goodwin proves another great advantage for my system, and one which I think "M. E." will admit should not be overlooked. Mr. Goodwin acknowledges that it would be absolutely ridiculous to make the gas and water mains of our streets no larger than the service-pipes, yet a precisely similar

and equally erroneous principle is daily acted upon, and (perhaps unintentionally) advocated by men of acknowledged reputation as mining engineers. I regard the galleries leading from the main air-ways in collieries as very similar to the service-pipes used for conducting gas into our houses, the colliers working at the face of the coal representing so many full-sized Argand burners. Now, who would think of so arranging gas-pipes that there should be a 9-inch main in the street to supply a couple of hundred 4-in service-pipes? Surely no one; yet in collieries this is much the system adopted. Indeed, it is sometimes worse, for the current of air is led on through a main twice as large at one part as at another.

In supplying gas to towns the mains are laid sufficiently large to let ample gas for the entire consumption pass through them; from these there are branch mains, smaller than the principal mains, but of sufficient size to ensure the district to which they belong having an ample supply of gas; from these, again, are service-pipes to supply the various houses. By this means every burner has plenty of gas, yet none is wasted; and I contend that by adopting a similar method in ventilating collieries, every collier, and every crevice in the mine, would have plenty of air, and all the power employed would be utilised in securing the safety of the pit. Lastly, with regard to the question whether the furnace or the machine is preferable, I think that if "M. E."s suggestion to provide duplicates were adopted, no one would be able to doubt the superiority of mechanical ventilation. I believe, too, that the system of using duplicate machines would entail scarcely any increased cost, as smaller machines would suffice, the second machine being applicable upon an emergency; whilst with a single machine an emergency could only be provided for by erecting one unnecessarily large and costly.

Atlas Safety Chandelier Works, Hatton Garden. R. H. HUGHES.

## THE LYNCH COLLIERY INFORMATION.

SIR.—As my letter which appeared in the *Mining Journal* of Oct. 26 has been erroneously attributed to Mr. Evans, I may state that I have not the privilege of holding any Government appointment, neither have I the misfortune to be directly involved in the dispute between the owners of the Lynch Colliery and the Government Inspector; but as one wishing the lives of the colliers to be saved, wherever by precautionary measures they could be, I am naturally inclined to construe the provisions of the Act as much as possible on the side of safety, and I doubt not, as in the case of the Lynch Colliery information, the gentlemen entrusted with carrying out the Act will incline to the same view.

The cost of keeping bore-holes in advance is so trifling, that for the money consideration few colliery owners would object to boring. I believe that in no district it would cost 3d. per foot, so that a large colliery might be secured the advantage of the bore-holes for 200 ft., which amount would be payable by easy instalments. The principal reason I have for concluding that the owners were justly convicted is that the bore-holes were actually kept forward until within a few days of the accident, so that Messrs. Perkins must have had grounds for supposing there was danger of water.

COAL.

## DRESSING ORES—PERCUSSION FRAME.

SIR.—While reading the interesting article in the *Journal* of Nov. 2, containing the proceedings at the Mining Congress at Vienna, I see that Mr. Rittinger exhibited the model of a new continuously-working percussion frame for dressing ore. I beg to say that at the beginning of this year I made a small working model of one for the same purpose, but of a different construction—that is, three tables, or frames, in one outer frame. The three tables are one over the other, and as the work comes over the head on the first frame, which has a little incline towards the bottom, as in the tin frames, which receives its shock from the upper end, which causes the best ore to go over the upper end of the frame, while the poorer goes on the second, and then the third, so that the whole is three frames without a head-piece, or opened at both ends. There is clear water coming on all the frames, but not with the work, so that the clean water meets the ores as they are thrown forth with the shock (this I took from the vanning shovel), which I propose to take from the stamps, and if the frame is applied to take the ore as it comes from the stamps. That which comes over the first frame will be almost clean ore, and that without any labour, as there should be boxes under each frame to receive the ore; this would not only be the saving of much labour, but it will save the best of the ore, without being further exposed to much water, which causes such great loss in dressing. If this be attached to the stamps it can work night and day without any labour, only emptying the boxes. I may also say that about six weeks since we had three or four barrowsful of very rich silver-lead slime ore (which was too little to put in a large bundle), which we put on the working model, worked by a boy, and which cleaned the ore remarkably well. This machine will answer for any kind of ore that has to be stamped on any other slime ore.

I also see in the same article reference to the great labour in putting ores through tyes, strakes, or shaking-trunks. I may observe that for the last four years we put our ores from the stamp-pit to the shaking-trunk, which divides the rough from the small—the rough in one hopper, the small in another, while the fine slimes go into the slime-pits, which is all put through the first dressing without being lifted with a shovel.

Tonndashan Mine, Kenmore, N.B., Dec. 6. B. GRIBBLE.

## WHERE DID SIR HUGH MYDDLETON OBTAIN HIS WEALTH?

SIR.—Nothing seems to me more absurd than for writers, who live ages after certain well-established transactions have taken place, to publicly assert all prior accounts on such subjects are wrong: even those versions that might have been dictated by eye-witnesses, and handed down from generation to generation, are to be considered false revelations. Take, for instance, the modest modern declaration that the common story told of Myddleton receiving from a silver mine in Wales the funds expended by him in attempting to form the New River, is altogether without foundation—the only mining adventure in which he entered previous to the New River enterprise being that at Denbigh, which proved a total failure. Now, unless subsequent scribes can demonstrate how and where that great engineer obtained the means to enable him to carry on such expensive designs, few thinking persons will stow away Stowe to smile on Smiles, when tradition repeats Myddleton did not begin his great water-course till after fiery Welsh extracts enabled him to do so, which, nevertheless, turned out more expensive than anticipated. But if anyone can be made to believe a contemplated work of such magnitude would have been undertaken at the sole cost of any private gentleman, after failing in mining speculations, then they must believe Mr. Myddleton was knighted merely for his fortunate and prosperous skill in discovering silver after his New River failure; if so, what occasioned the great engineer to die so poor, if the prosperous silver discovery was antecedent to the unfortunate Denbigh failure, that preceded the more unfortunate New River attempt? G. F. GOBLE.

Aberystwith, Dec. 10.

## GOLD—PAST, PRESENT, AND FUTURE.

SIR.—Since it is a palpable fact that native gold quadruples its weight in the hands of man in a few years, yet none can observe the least indication of its *worth-less* nature approaching in that form such unprecedented influx any of the *dusty* cargoes have been exchanged below prime cost; because, in proportion as the yellow solids are made to leave their natural deposits, to be deposited as national wealth, so does it get converted into those small circularities daily used as equivalents for those large circulants known as dollars, crowns, &c., thus by gradually and mutually exchanging the massive white currency for compact leaders, the real value of either metal is not much affected, for who would prefer carrying about a couple of stone of silver when only a pound of gold answers better? However, when the time actually arrives that there will be a surplus of gold on hand after each nation converts sufficient weight to constitute the general circulating medium of their country, then will it be time enough to advance probabilities on its future appliances and relative worth, as to whether the banks of Nature will break, or the *art-full* banks of men fail from over (*spec*

long agree upon any natural cause, but continue to invent such complicated theories, that what one set approve others condemn; and so will it be till the last age of mankind became so matured that the details of every cause and effect will be incontrovertible; it will then end for this planet's order of superior beings to be reorganized *de novo*. In the meanwhile, let it be truly considered which era ought to be classed the most wise: the first that fully comprehended every natural principle human nature could receive from their Creator; the second, who understand not one natural phenomenon correctly, but are daily scheming theories to account for this, that, or the other; whereas, the third series of investigators will become so ruled by precedents as to know the reality of every cause and effect in Nature and Art (as the first), and yet perform no new thing under the sun beyond what was primarily infused throughout the world at the creation of man.

December 9.

G. F. GOBLE.

#### ON THE INTERNAL HEAT OF THE EARTH.

SIR.—Your correspondent, Mr. Steevenson, appears to have forgotten the question at issue—the existence or non-existence of a nucleus of molten matter. We deny that the arguments brought forward are sufficient to prove the existence of permanent fire. We know that heat can be produced in various ways, and that the combination of hydrogen and oxygen gases will produce the most intense heat; but neither this, the elements of fire, nor calorific, are the questions, but simply are geologists and others justified in assuming a permanent nucleus of molten matter or a burning cauldron within our earth, covered only by a comparatively thin crust of semi-aqueous substances? I know the effect of pressure on water, as I have had a great deal to do with hydrostatic presses, and am, therefore, well prepared with experimental data to discuss this question, had it been necessary, but I need not occupy your columns on such a subject. If your readers are satisfied with your correspondent's so-called demonstrations, I shall not make any further remarks on his observations. I wish, however, Mr. Steevenson had given us an explanation how he could determine whether the globe was solid or hollow by means of superficial attractions. We have proved that a globe of 12 in. diameter and  $\frac{1}{4}$  in. thick indicates as strong an attraction all over the surface as a solid globe of the same dimensions. Since this is an experimental and demonstrable fact, I am curious to know how your correspondent can prove whether our earth is solid or hollow. I admit that I write as a dull matter-of-fact man, who will take nothing for granted—no mere assumptions, not even from the most eminent mathematician, on purely physical questions. I must have demonstrations well grounded in all matters connected with terrestrial physics, and not the *ipse dicit* of anyone, when theories are brought forward which demand unreasonable conditions, and totally at variance with our daily observations in all parts of the world.—Dec. 10.

EVAN HOPKINS.

#### THE GEOLOGICAL FORMATION OF THE EARTH—No. X.

SIR.—My preceding letter terminated with a promise that it should be followed by a reference to the Metamorphic System. In doing so, I may observe that this appears to be only bodies dissolving and re-uniting, in combination with other bodies. It may be termed metamorphic, or any name the reader chooses, as it is immaterial how bodies become disunited, provided it can be proved that they do so, and that they again unite with other bodies and form a new substance. Philosophers disagree as to matter being in solid minute particles, or as a fluid, which I leave with them for decision, it being sufficient for me to know that it does exist, and when in mass is never steadfast, ever dissolving and again uniting, in most instances, with substances not now to be seen in the dissolving masses, still they might have been there when first formed. Sulphur, lime, fluor-spar, and other less durable substances would, and do, first dissolve, as the seat of their crystals are often left to be seen. On losing the substance that aided their first formation, it becomes a query if the remainder could possibly hold together; if so, an acid or a gas, that had no effect on them in a body, may then attack and dissolve them rapidly. These things are well known to practical men to be daily taking place in all our mines. I may fairly say, as a practical man, in common with others, that we know it, and are hourly endeavouring to discover the earth's internal laws for our guidance. It may be said to be a great discovery when the miner asserts fearlessly to the world that these things do take place. And we say it is the duty of those of the plutonic school (who afterwards become geological teachers and national chemists) to define to us the law as to what causes the dissolution of rock and all metallic substances, which again no mysteriously re-form. I may ask in what way educated men have benefited the mining community? Have they in any way aided to discover the working laws of Nature? Is it by their constant lecturing on the capacity or cubic contents of the interior fire of the earth, and the great wisdom displayed in submerging turf bogs, for which we, for our umbrella, are shortly to be deprived of all the metals and coals? Such theory is amusing, but as old as the Phoenicians. Will they tell us if the interior of the earth is composed of asbestos, and like that substance, unconsumable? They might let us know how it receives its supply of oxygen, so indispensable to combustion.

I think I have confined my observations sufficiently far on interior fire, and will allow the theory to take its course, well knowing its future; and will now return to the upper regions, or granite crust, where we lack no proof that layers, lodes, and all their substances are continually undergoing changes. I may be asked, what produces these changes? My reply is, nothing more than chemical action; by the contents of one rock acting on another, or the contents of substances in lodes acting on the stratifications; they will also act on each other wherever a large body of ore is forming in a lode. It acts as an acid, decomposing the adjoining rock, until it has made sufficient room for the deposit of the forthcoming ore; more room is often made by the dissolving action than is necessary, and large open spaces are often found, termed by the miners "vugs." This has nothing to do with interior fire, being produced by chemical heat for a short distance, proportionate to the decomposition going on; and at 100 fms. below the seat of such chemical action no perceptible heat would be detected. I stated years since that the child was then born who would live to see the hot lodes at the United Mines become cold; let them work out all the copper, and mark the result. I should not be surprised if it is not already tempering down, as it was a body of ore forming, highly charged with sulphur, at the very time man was working it. If I am correct, it will at once prove that the seat of combustion to decompose or re-form rocks or ore is not at the centre of the earth, but at or about where decomposition or re-composition takes place, which will overthrow all the igneous theorists at one swoop, and thus the United Mines and Wheal Clifford, in Gwennap, will be adding another link in support of my views, though the hot water may go deep in these mines. I have given my views as to what mineralise ore and aid its growth, also what decompose it. It is now the theorists' duty to refute these statements, if they can; if not, I have gained two points, which will materially strengthen all my other arguments, although I consider two points quite sufficient for me to gain. Still I will touch on the re-formation of ore by observing that the point most essential to attain is the law of affinity, which seems to me is very much neglected by both practical and theoretical men. It is thought that all bodies hold the property of attracting and repelling each other; some, or even all, may possess both, being often repulsive to one body and attractive to another, hence we find substances so nicely laid down in lodes as to be often termed or said to be in "sirps."

Nearly all ores but gold or tin require sulphur to mineralise them; these, having a great affinity for each other, will get together if possible. Silver has a greater affinity for lead and copper than for sulphur, still in either case sulphur is combined; if lead and copper be absent, it will form native silver, or unite with other substances. It is not unlikely that affinity owes its origin to electricity or magnetism; and when in contact with oxygen regulates the earth's temperature in uniting and combining substances. Tin unites with oxygen, and is the only ore not combined with sulphur that pays the English miner. I observe there is seldom a week passes but some one attempts to show that the great asbestos fire in the earth's interior is sending off solid fumes, and that it is either caught or settled at or about the earth's surface. To me this is of no moment; let such persons first convince themselves that all native copper is formed in cold water, and adheres to iron from affinity, which will show itself in two minutes. Crystals of tin ore are formed in cold water, also carbonates of lead, quartz, shell, iron, lime, and native silver, which will prove that but very little heat is required to produce such formations. Wherever I found heat in the earth, I discovered sulphur to be the cause. It is in very few of our copper-ores that we find any sulphur; but wherever I have found it to occur plenty of sulphur was at hand. Gold, like all other substances, is dissolving in the earth, and, being ponderous, is carried near to the surface by centrifugal force, where it has settled down with other substances for which it has affinity. I believe all the large masses found at or about the earth's surface to be collected together from affinity.—26, Fleet-street, London, Dec. 9.

N. ENNOR.

#### MINING IN SPAIN—BEARIZ TIN MINES.

SIR.—The directors or their agents of these mines would do well to thoroughly examine the titles of Senor Merelles to the concessions, as also to see that the marks marking out each group of concessions, or pertenencias, have been set up in due form and in due time, as the Spanish Law of Mines on these points is very strict. I by no means would hint that the titles of Senor Merelles to these mines are not good; but, as before stated, advise a thorough investigation of them, as not long since I knew of two pertenencias forfeited for the slightest informality possible. It would be well to obtain a certificate from the engineer of the district that all the formalities of the law have been carried out in due form. Be it perfectly understood that I know none of the parties interested, but simply make these remarks to put mining capitalists as much as possible on their guard.

"Cornish Miner," in the Journal of Nov. 16, seems to over-estimate the work of 75 men per day—750 tons, to be broken, conveyed, and washed properly; however, when he finds that with the number of men named (Spaniards) he has realized this amount of work, and common civility is established at the mines, I shall be most happy to visit him, in order to learn the way and manner in which this work has been performed. I wish this company every success they so richly deserve in this wild spot, and sincerely hope that there be any truth that the truck system is carried on there, or about to be introduced, the directors will at once see to its abandonment, in order to prevent as much as possible any discredit to British enterprise in this country. MINE AGENT.

North Spain, Nov. 29.

#### MINING IN SPAIN—MINES, PASSPORTS, &c.

SIR.—On my return from a short journey in this country, I found in the Journal of Oct. 9 another communication from your valuable correspondent, Mr. N. Ennor, under this heading, to which I would beg to offer a few brief remarks. Mr. Ennor seems to intimate that "Mine Agent" was defrauding, as he styles it, the abominable passport system of this country: this "Mine Agent" had no desire to do, but simply to show that he, Mr. Ennor, had been shamefully imposed on, and not at all in accordance with the laws of this country, which, to some extent, I am glad to see Mr. Ennor acknowledges. Mr. Ennor enumerates the different places he travelled through, &c., which I by no means would attempt to dispute, but, on the contrary, say that great credit is due to him for

his energies, in completing so great a distance in so short a time, at his somewhat advanced age. I can only add that during the time I have been in this country I have never as yet paid a farthing for passports, and have travelled some hundreds of miles. Mr. Ennor also remarks that Englishmen could better employ their time than by writing on such matters as these, but describe the general features of the country; this I am quite ready to admit—to the latter I have not the slightest objection for Mr. Ennor to confine himself for the future, but shall at all times, with a very great pleasure, read his general descriptions of the same. As to the selection Mr. Ennor speaks of, I beg to inform him that it was by no means a selection of mine, I simply having engaged to work the mine to the best of my abilities for a certain time, which is not yet quite expired, and during which I have no desire, as is too often the case, to mix up in other mines. As to Mr. Ennor's statement of my having asked him to pay me a visit, but had not given him my name and address, to this I would beg to say that he could then, as now, obtain my address by applying to the office of the Journal.

Nov. 29.

#### MINING IN LAKE SUPERIOR.

SIR.—Amid the unsettled state of this country, which must be regarded as of a very serious nature, it is gratifying to say that Lake Superior is rapidly improving as a mining district, nor can it be doubted that it will long be one of the greatest mining countries in the world. The dividend-paying mines are more productive this season than for some time past, as also those on the eve of dividends. Small mines, regularly drawing assessments, is that class now suffering through the misunderstanding, or difference in views, of the Union and the Southern states. Capitalists who would gladly pay in to prove up their property under any ordinary circumstances, now prefer waiting the result of the Southern movement. MINNESOTA MINE is producing about 160 tons monthly for the last six months; ROCKLAND, 42 to 45 tons; and NATIONAL produced in September 107 tons: this product is produced in a legitimate course of mining. SUPERIOR MINE confines its operations to driving an adit level, having a depth of between 200 and 300 ft. on course of the lode: they have driven through several bunches of copper, even masses of tons weight, which are short, but at a greater depth undoubtedly would be found more lengthy; and one or two shafts south to the adit, preparatory to sinking and opening ground below that point, would doubtless open up a paying concern: they have the Minnesota lodes, working by 12 to 16 miners. OGAMA MINE is working by a few miners carefully, and their prospects are very cheering; the same may apply to the EVERGREEN BLUFF MINE. The latter took out last month 12 tons of copper of 70 per cent., on a cost of about \$1600; this, however, is, as the Cornishmen say, a "start," as their usual samplings are about 6 tons monthly. They are on the south range; the lode is without walls, and in speaking of copper—"where it is, there it is"—bunchy, but like most all other lodes make these bunches close to cross-courses. TOLTEC amongst its neighbours, as stated above, is suffering through the unsettled state of the Union, but is pronounced by our Lake Superior geologist, Mr. S. W. Hill, to have the Minnesota formation—in fact, the company has opened two shafts, about 100 ft. deep each, on what is called the Minnesota north lode, and found it very productive—even masses nearly  $\frac{1}{2}$  ton each. It is expected daily they will increase their force, and firmly believe the prospects for a paying mine are second to none on the lakes. PORTAGE LAKE MINES, PEWAHIC, FRANKLIN, and ISLE ROYALE are producing well, as also the CLIFF MINE, in Eagle River district. COPPER FALLS, although they had to call a dollar assessment on 20,000 shares, has done remarkably well.

In addition to the increased product of the mines, every exertion is used by the different companies to improve the management, and I am happy to notice a great saving is effected: for instance, we will take the Cliff Mine, being an old standard. Some seven or eight years ago a new manager was appointed, who knew little or nothing of mining. The mine, then about 80 or 90 fms. deep, was concluded by him to be deep enough, consequently he confined his attention to driving and stopping, the latter more particularly, which resulted for a year or two in an increased product, finally this increased amount of product failed, and, indeed, they failed to produce the original quantity under the former management. Ere long they ceased to declare dividends, and it was thought by many capitalists that the mine had failed, and it was no longer the Cliff Mine. The mine was being inspected by competent men in behalf of the company, the error was soon disclosed: they had worked out all the reserved ground for stopping, and had not opened any new by sinking. Sinking being at once ordered and followed up, it is now again the Cliff Mine, and regular dividends are fully expected. Too often it is the case that the difference between a sound practical man and one of no practice is lightly estimated.

MINE AGENT.

Lake Superior, Nov. 4.

A CORNISH CAPTAIN.

#### MINING IN CARDIGANSHIRE.

TO THE DIRECTORS OF THE HAFOD LEAD MINING COMPANY (LIMITED).

SIRS.—I have to report that the wheel and other works for the Pontystwith Mine are progressing satisfactorily, and I am assured that the whole will be in working order by the time specified in the contract; the pumps will be supplied by the Cambrian Foundry Company, whose contract I beg to hand you herewith. With respect to this mine, it is the opinion of many captains of mines, and other practical men I have seen, that a great course of ore will almost immediately be found in it, and they all commend the plan adopted for working it.

Since my last report I have been engaged inspecting a number of the paying mines within a radius of ten miles, and in going over the company's sett, accompanied by men with pick and shovel, for the purpose of obtaining specimens of the various outcrops. My object in visiting the adjoining mines was to obtain the actual observation the run of the lodes, the local position of the mines, with respect to the means at hand for working them, as regards water, roads, timber, &c., the various appliances for winning, crushing, and dressing the ore; the mode of letting and paying for the work, and the general indications of the lodes, so that a reasonable deduction might be arrived at of the probable success or otherwise of your company. Among those mines visited were some of the oldest and newest in the locality. I went underground at several, and proved by the magnet the direction of their lodes to be from about  $30^{\circ}$  north of west to the point south of south of east; I also proved them in the same way on the surface, and was astonished to see the facilities which the nature of the country affords for the discovery of metalliferous deposits; the indications are most clear, and no one can mistake them; the chaumas and streams in the hills intersect in very many instances the lodes at right angles, and lay them or their outcrops bare in numerous places; so that, knowing the direction of a vein in work, its course onwards can be clearly traced on the surface; the matrix in which the lead is found is in all cases the same—the clay-slate and carbonate of lime. Water for motive power is abundant everywhere in this quarter, although, from the circumstances of many of the mines being on the tops of and high up on the hills, it has in many instances to be brought from a considerable distance in water-courses; the expense of so doing is not very great, but it has this serious disadvantage, the water in these courses being comparatively a small body, and in a high and exposed position, liable to be frozen in winter, entailing a consequent stoppage of the works. The roads are in many places of the most primitive construction, and cause the transport of the ore, drawing of timber, &c., to become serious items in the expenditure of the mines. Timber is nowhere so abundant as on the Hafoed estate. At some of the mines there is scarcely a tree to be seen for miles.

As regards the mode of raising, crushing, and dressing the ore, it is, generally speaking, the same at all the mines in this district. At Frongoch Mine some patent rotary puddles have been erected, which seem to cleanse the ore thoroughly to the minutest particles; here the jigger is done by hand, but at other of the Llansilys Mines it is done by water-power, though each hutch still requires a girl to attend to it. I was informed that it is the Llansilys Company's intention to erect some of Borlase's patent jiggers, which are said to work well. According to the position of the mines is the extent of surface area required; if on a river, such as the Ystwith, the waste and slime is thrown into it, and carried off. At Frongoch, having no advantage of this kind, their plant covers about six acres, and being obliged to dam the water to obtain sufficient power for their works, the ponds cover many acres more; of course, both plant and ponds will increase in area with the ore raised. At Level Fawr (opposite Pontystwith) the plant covers about 4 acres, and Cwmystwith about 10 acres, in consequence of the position of these mines. The mode of letting the work is universally the same—by public competition; the price varying according to the nature of the ground to be worked; but 51 per fm. for driving, and 101 per fm. for sinking, may be taken as the average maximum, the takers paying for powder, candles, &c. Payment is made monthly, and when more than one month's work is let to one party, a month's pay is always retained in hand, as a guarantee for the due performance of the contract. Some work is let on tribute at so much per ton on the ore raised, the mode of payment being the same. The general indications of lodes at their outcrop are the same all over the district—a bluish clayey slate, spar, and gossan, which are never known to fail.

Comparing the company's sett with the others I visited, I have no hesitation in stating that it clearly possesses advantages over every one of them; along the value of the Ystwith, its southern boundary, there are numerous lodes seen, all of which, should it ever be necessary to erect machinery, there is always plenty of water-power, with a direct fall into the Ystwith for waste, so that no great area can ever be required for the workings, and from the sheltered position of the valley the works are never likely to be stopped in winter.

Abundance of timber is to be had all over the estate; the roads are excellent, with a gentle fall nearly all the way to Aberystwith—a point of great importance, when it is considered that three horses are required to take about 25 cwt. of lead ore from Cwmystwith, with the back carriage with a load being quite costly.

Having carefully noted the course of the lodes of the adjoining mines, both underground and on the surface, and their indications at the outcrops, I felt that I could now form a fair conclusion as to the indications of your company's sett. Accordingly, with a couple of men, and accompanied by Mr. Raw, Jun., and occasionally Mr. Raw, sen., and Mr. M. Francis, I commenced exploring; I regret, however, to say that, from the swollen state of the rivers, I was unable to get at many points of interest. Mr. Raw, sen., has been connected with the Cwmystwith mines for forty years, most of the time as chief captain, is a man of considerable wealth and position in the county, thoroughly practical, and noted for his caution in mining matters; his opinion, therefore, is of some weight. He asserts that the two Comet lodes of the Cwmystwith Mines run through your sett, and that he has proved them in on many occasions, and says he is prepared to stake all he is worth that it is so. He clearly showed me their course, and the points at which they enter your sett, going westward, at Nos. 1 and 3 on the map, passing right through the sett for about a mile and a half. Should this actually prove to be the case on a proper trial it will be a most valuable discovery. Capt. Francis entirely corroborates Mr. Raw in this, and others whom I saw the same; Mr. Raw also asserts that he has traced and proved many other lodes through the sett, and his opinion is that it is the great asbestos fire in the earth's interior sending off solid fumes, and that it is either caught or settled at or about the earth's surface. To me this is of no moment; let such persons first convince themselves that all native copper is formed in cold water, and adheres to iron from affinity, which will show itself in two minutes.

Crys-tal of tin ore are formed in cold water, also carbonates of lead, quartz, shell, iron, lime, and native silver, which will prove that but very little heat is required to produce such formations. Wherever I found heat in the earth, I discovered sulphur to be the cause. It is in very few of our copper-ores that we find any sulphur; but wherever I have found it to occur plenty of sulphur was at hand. Gold, like all other substances, is dissolving in the earth, and, being ponderous, is carried near to the surface by centrifugal force, where it has settled down with other substances for which it has affinity. I believe all the large masses found at or about the earth's surface to be collected together from affinity.—26, Fleet-street, London, Dec. 9.

N. ENNOR.

an ordinarily promising one. It is much superior in point of position, roads, and time to the surrounding mines; the royalty is small, and, with ordinary judgment in the prosecution of the works, I feel certain that the result will justify all the representations I have made of it to you individually and collectively. It is but fair that I should here state that the company possesses a most intelligent and scientific engineer in Capt. Matthew Francis. All the great mines in this quarter are indebted to his skill, and he is held in the highest estimation by all classes of this community.

THE R. COMYS, Manager and Secretary.

#### MINING IN SCOTLAND.

SIR.—It will be remembered, when describing the mines on the margin of Loch Tay, Perthshire, that I mentioned a certain mine at the Corriebe Mountain where silver-lead ore of marvellous richness had been procured. I see by the *Mining Journal* of Nov. 30, that one ton of it was sold at the astonishing price of 501. 10s. per ton. I also learned that the silver produced yielded a considerable percentage of gold. I saw large pieces of native gold from this mine attached to stones of blonde. The mine was slightly wrought by the Marquis of Breadalbane; but little beyond opening the back of the lode was done, still many tons were sold at 601. per ton. I found gold visible to the naked eye near Lochearnhead. Who can gainsay the future great success of Scotch mining enterprise?—*Lochhead House*, Dec. 3. THE AUTHOR OF THE TWELVE PAPERS.

#### ST. JUST CONSOLS.

SIR.—Having been long acquainted with the locality of these mines, I cannot forbear adding my testimony to the value of the sets comprising them; not only have I been fully acquainted with them from my youth, but I have roamed over them many times searching the cliffs and burrows for curiosities and rare minerals which therein abound, in company of the late Mr. Lavin, mineralogist, of Penzance, and well we often rewarded, being able to procure good examples of axinite, actinolite, and amethyst, amongst others. We also frequently met with gold, bold crystals of black tin; the strata and the locality are all that can be desired for tin and copper mining, and few attempts have ever been made in this parish, under

scars. As regards the higher royalty paid for "Four-feet" coal, it is not attributable, as Mr. Nixon implies, to its superior quality, but exclusively to its being considerably nearer the surface than the underlying seams, with which it is ordinarily mixed, thus requiring less capital for development, and, by bringing it within the compass of smaller capitalists, rendering it more marketable to the lessor or proprietor of the colliery. Further, in consequence of the increased cost attending the winning and working of the lower veins, the royalty invariably decreases in proportion to the greater depth of the particular vein worked. With respect to the "Four-feet" coal commanding a higher price, Mr. Nixon is again incorrect, for it is notorious that the Cwm Amman and Carr's Merthyr, which are exclusively Four-feet coals, unfortunately for their proprietors, afford no such advantage. Mr. Nixon next enlightens his readers by stating there are nine seams worked and sold by other colliery proprietors, comprising an aggregate thickness of 43 feet. Although, by referring to my letter, he will find the number really worked in the Aberdare Valley was not mentioned, he has himself inadvertently supplied the information, by stating the actual number to be three only, comprising the Upper Four-feet, Six-feet, and Nine-feet. It is true there are one or two exceptions, but generally the working is confined to these seams. From the extraordinary efforts made by Mr. Nixon to establish the comparative superiority of his Four-feet coal, and the powerful aid afforded him in promulgating his exclusive theory by his influential partners, it is not surprising that the different steam-packet companies he has enumerated have been induced to test its value; but already opinions are changing, to the prejudice of his theory. As before stated, the Strokesuper-General has issued an official letter, intimating that it was found "inexpedient" to confine the supply of steam coal for Government use to the "Four-feet" seam, the customary mixture of deeper and harder veins giving a more satisfactory result, the proportions of which, in reply to Mr. Nixon's facsimile enquiry, are best determined by experience, and the condition of the particular veins worked. In conclusion, I must contradict the charge imputed to me of attempting to show Messrs. Nixon's coal "to be inferior to others." I most emphatically disclaim having been influenced by any such invidious motive. It has been my object to disprove the assertion of the *Times* correspondent, in stating that "this description of coal possesses 20 per cent. greater power than ordinary Welsh coal." It is evident the comparison cannot include coals worked in the Aberdare and Merthyr Valleys, for their theoretical evaporative power is shown to be but fractionally different to that of Messrs. Nixon's, which, however, has not given so satisfactory a result in the laboratory of Messrs. Miller, Hofmann, and Frankland as at Portsmouth Dockyard. CARMON.

## WHEAL FLORENCE COMPANY.

SIR.—I think it necessary to notice a letter in your last paper from Capt. John Curtis, referring to a mine called Wheal Florence. This piece of ground was granted to Mr. H. Michell by the late Mr. Trevelyan, by a sett dated August 29, 1849, for a term of 21 years, and the interest under such sett is now vested in the Wheal Grylls adventurers, who also held grants from the tin boundaries. A suit in Chancery was instituted by the present Mr. Trevelyan, to set aside his father's sett, which the adventurers were advised to defend, but no further proceedings seemed necessary, as Mr. Trevelyan became satisfied that the Wheal Grylls party could work his ground better than any others, and a negotiation was entered into, having for its object a new sett to Wheal Grylls, and an honourable and permanent settlement of all differences. No prudent man would take ground which was the subject of a Chancery suit; and much surprise was naturally excited at learning that a licence of the spot in dispute had been granted by Captain Curtis, the toller of Mr. Trevelyan, without the knowledge of his solicitors. This is the mine called Wheal Florence, but it is at present under water, and could not be worked by any party without an engine. The Wheal Grylls adventurers can drive levels through this land by their present machinery, and they intend to do so as soon as the arrangements with Mr. Trevelyan have been perfected. In the meantime notice has been served on the Wheal Florence agents, that the tin raised by them is the property of the Wheal Grylls shareholders, and I have no doubt the former will see the impolicy of any further interference with those who have expended a considerable sum in exploring the ground and discovering the tin mentioned by Captain Curtis.

W. J. DUNFORD,  
Secretary to the Grylls Mining Company.

December 12.

## SILVER VEIN MINING COMPANY.

SIR.—The report made by the directors, and published in the Journal of Nov. 23, would have received my reply had not experience convinced me that the question of the extraction of silver from oxides of iron (gossan), and from other refuse, so generally disregarded by Cornish miners, was one commercially and scientifically of that importance to the mining interests generally, that no personal feeling which might have been for the moment caused by a report so practically in error should in any way influence the question. It was my intention, this week, to have given fully my reply to the statement put forth, had not private business and ill-health prevented me. On my return to Cornwall, after having inspected the lode in the 18 fm. level, which from analyses of ores taken therefrom have increased in value for silver upwards of 100 per cent., and those operated upon by me, taken only from 6 to 2 fms. from the surface, the mine at that time being rather under 10 fms. deep. From reasons given, I must solicit the insertion of my answer to the directors' report at an early period.

F. SQUIRE.

## Meetings of Mining Companies.

## CARADON CONSOLS MINING COMPANY.

A general meeting of proprietors was held at the company's offices, Austinfriars, on Wednesday, Mr. BUCKLAND in the chair.

Mr. E. KING (the secretary) read the notice convening the meeting, and the minutes of the last were read and confirmed. The accounts for the three months ending Sept. (from which the following is condensed) showed—

July mine cost, merchants' bills, &c.	£283 3 6
August ditto	223 16 9
Sept. ditto	172 1 7
Whim-engine (mote of purchase-money)	362 10 0 = £1041 11 10
Balance last audit	£ 56 12 0
Call	685 10 0 = 742 2 0

Leaving debit balance ..... £289 9 10

The report of the agent was read, as follows:—

Dec. 9.—The engine-shaft is down 14 fms. below the 54; we purpose sinking 6 feet deeper before opening on the course of the lodes. About 3 fms. above the present bottom of the shaft we met with the counter lode going down nearly perpendicular, and which has produced fine stones of ore, but, owing to it being within the influence of the cross-course, is now unproductive; we hope, however, as soon as the shaft is down to the required depth, skip-road and casing fixed, to begin immediately to open on the counter and engine lodes, away from the cross-course, into settled ground, and also put out cross-cuts to intersect the very kindly lodes seen in the 54. We may reasonably expect that the operations will be attended with good results. There has been no new feature in the cross-cut south during the past quarter; the end is now suspended, as we intend to push out at a deeper level. We have intersected two lodes in the north cross-cut since your last general meeting, and have opened a short distance eastward on one of them, where it has produced good work for copper. This will unite with the Menadue lode, about 15 fms. east of the cross-cut; we are, therefore, forcing on the end on the Menadue, to meet this point. We are driving west on a north lode, to prove it away from the cross-course; so far it has produced good stones of ore. A fathom or two further will prove whether it is likely to become more productive or not. The 54 north is suspended, it being near the boundary of Cradock Moor. The Menadue lode has been extended west of cross-course 5 fms., where we commenced operations; here the lode was not more than a few inches wide, and very poor; it is now full 2 ft. wide, regular and well defined, and carries good spots of ore. This is a very promising end. We are opening on the Menadue lode, east of cross-course; the lode in this direction was scarcely discernable when we began to drive, and although we have only extended a little over 2 fms., the lode is 2½ ft. wide, and yields stones of ore, worth at least 20 per cent. for copper; and, judging from present appearances, there is every reason to expect that we shall soon have a good productive lode, or, at all events, at the point where the north lode and this form a junction a course of ore may almost be depended upon. I, therefore, strongly recommend to continue to drive east and west on the Menadue, and to open out vigorously at the bottom of this mine as soon as practicable. I have a strong opinion that the lodes will be found productive as soon as fairly laid open at the depth we purpose driving. I calculate about 170 fms. per month will be sufficient to cover all expenses with the force now employed.—W. RICH.

The CHAIRMAN having moved the adoption of the report and accounts, said he felt it would be unnecessary for him to make any lengthened remarks upon the position and prospects of the property, the captain's report having already entered at considerable length into the whole of the details connected with that matter. He (the Chairman) must say that he considered the prospect highly promising, for he had no doubt that at the 65 fathom level the whole of the lodes, when intersected, would lead to some very important discoveries, which would greatly enhance the value of the property.

Mr. BALSTER enquired how the statements and estimates made in the report submitted to the last meeting had been borne out by actual results?

The SECRETARY replied that at the last meeting the lodes referred to in the report just read had not been seen, but since that period they had been intersected in the cross-cut in the 54, from which time they had been in process of development. The shaft was to have been sunk to the 70, but it was found that a 14 fm. level was a long lift, and at that depth the level would be driven.

Mr. COOKE enquired the reason that the whim-engine, which had been ordered 12 months before the mine was brought into Mr. King's office, had not been charged in the accounts before the present time?

The SECRETARY, in reply, stated that the whole of the liabilities were charged up to the end of September, including a moiety of the cost of the whim-engine. That engine was ordered some 18 months since, the payment for which was to be made by six and nine months' bills after the time of delivery, and, therefore, until the engine had been erected, either of the amounts could not be charged in the balance-sheet. Before the next meeting one of the bills would become due, and hence the amount had been charged in the present account, and in another three months the second bill would become due; but there was no other out-standing liability against the mine.

Mr. COOKE considered the explanation satisfactory.

Mr. BATTERS was glad Mr. King had given such a satisfactory explanation, for the cost of the engine not having been liquidated had been made a handle of by some persons in the market; the explanation just given threw a totally different light upon the matter.

The SECRETARY, in answer to a question, stated that the operations had within the last few months been extended. Six months back there were only twelve men, six in each cross-cut, but since then nine men have been put to work in the shaft, besides others who were engaged in opening the lodes. Their agent stated in the report that he estimated the shaft would be down to the 68 fm. level in about a month—that is, 68 fms. from grass. In the engine-shaft the lode had gone down more perpendicularly.

The report was then received and adopted, and the accounts passed and allowed. The CHAIRMAN said they had now to go into the question of finances. By the statement of accounts just submitted it had been seen there was up to the end of September an adverse balance of 299, 9s. 10d. According to the estimate made by their captain their costs during the current quarter would be 170 fms. per month. So that they had to provide for about \$100, including the first moiety of the cost of the whim-engine. The committee had gone into the whole question very carefully, and were unanimous in recommending that a call of 12 per share should be made. If no discoveries were made during the current quarter a similar call would be required at the next meeting. But looking at the favourable position of the mine, the encouraging prospects presented, and that henceforth they would be operating upon lodes instead of driving through the country in search of them as hitherto, he thought their chances of meeting with some good results were very great.

The SECRETARY, in answer to a question, stated that the outstanding liability was the second moiety of the cost of the whim-engine, everything else having been charged up to the end of September. He reminded the meeting that a great many things had been

required, which had occasioned a large expenditure, and it could not but be satisfactory to know that the whole of them had been charged and paid for.

Mr. BATTERS considered they were indebted to their secretary for the very satisfactory manner in which the calls had been collected, the arrears since last meeting having been materially reduced.

Mr. HAWKE considered that the management of the property was in every way effective, and he hoped that their exertions would soon be crowned with success.

Mr. PETER WATSON, who had been intimately associated with the property some nine or ten years since, stated that a short time ago he had the mines inspected, and he believed Caradon Consols would ultimately prove to be, if not equal to its rich neighbour, East Caradon, certainly a very productive property. In common with the opinion of everyone who knew anything of the district, he had always regarded the Caradon Consols as an unusually favoured property. He urged the great necessity of vigorous development at each point. The bottom of the shaft presented the most favourable prospects, and he would remind the meeting that should a course of ore be met with, it would be a source of perennial wealth, if it in any degree approached that of its neighbour, East Caradon, which he thought proved to be one of the most wonderful mines ever opened in the county of Cornwall. Without being so sanguine as to hope that Caradon Consols would produce such extraordinary results as had been achieved at East Caradon, without expressing his opinion of the peculiarly favourable geological character and position of Caradon Consols, or without referring to the acknowledged but yet, he believed, unascertained wealth of the district in which the property was situated, he thought it was not by any means an unjustifiable assumption to expect that Caradon Consols would yield such results as would be satisfactory to all concerned.

A call of 12 per share was then made, and the committee of management were re-appointed. Votes of thanks having been passed to the Chairman, committee, and captain, the proceedings terminated.

## NORTH WHEAL ROBERT MINING COMPANY.

An ordinary general meeting of proprietors was held at the offices of the company, Bishopsgate-street Within, on Monday, Mr. PROCTER in the chair.

Mr. J. H. MURCHISON (the secretary) read the notice convening the meeting, and the minutes of the last were read and confirmed. A statement of the costs and returns for the four months ending Sept. (from which the following is abstracted) showed—

Mine cost, merchants' bills, &c.	£2288 3 4
London expenses	51 17 10
Dues, &c.	129 7 0 = £2569 8 2
Ore sold	£2472 3 9
Discount on merchants' bills, & sundry receipts	2 19 4 = 2475 3 1

Leaving balance (loss) ..... £ 94 5 1

Up to the end of Oct. there was a balance of assets over liabilities of £197. 1s. 16d.

The report of the agents was read, as follows:—

Dec. 6.—We beg to hand you our report, showing the progress made in the further development of the mine during the last four months:—Murchison's Shaft: Elliott's cross-cut south, in the 52 fathom level west, has been extended 6 fathoms 1 ft. 6 in., and is still being driven for intersection of No. 2 south lode. The 52 fathom level west, east of Elliott's cross-cut, on No. 1 south lode, has been driven 10 fms. 5 ft. 9 in., and communicated with Crowle's winze; the lode, averaging 2 ft. wide, is composed of quartz, mastic, and stones of ore. The 42, on No. 1 south lode, has been driven east of Crowle's winze 7 fms. 1 ft.; the lode for the first 4 fms. is 18 in. wide, and yields in places good stones of ore. From this point, and home to the present end, the lode is improved, being at present worth 1½ ton of ore per fm., and promises further improvement. Edwards's cross-cut south, in the 30 west, has been extended 11 fms., and intersected No. 2 south lode, and from thence the 30 has been driven east on its course about 3 fms. The lode is 2 ft. wide, and consists of capel, quartz, mastic, and a small proportion of copper-ore. This drivage (the 30) has also been extended west 3 fms., sufficiently clear of the cross-course, and the level is turned north therefrom, for intersection of the lode. The 30 has been driven east of Davis's cross-cut, on the south part of the lode, and the lode is worth 2 tons of ore per fm. The 30 west, and west of Davis's rise, has been extended 2 fms., and for this length the lode yielded 1 ton of ore per fm., and promises further improvement. Edwards's cross-cut south, in the 30 west, has been extended 11 fms., and intersected No. 2 south lode, and from thence the 30 has been driven east on its course about 3 fms. 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cross-cut in the 45 south is progressing favourably; it is letting out a quantity of water; we expect to cut the lode this month. The lode in the 25, west of Norden's shaft, is 3 ft. wide; since our last report the lode has been split by a horse of ground; the branches are coming together again very fast; in 3 or 4 ft. driving we expect the lode will look much better. Norden's shaft and the winze in the 25 are down to water. We shall not be able to sink them until we cut the lode in the 45 cross-cut.

CLARA UNITED.—J. Lester, Dec. 11: The water was in fork on Saturday night, and the lower workings resumed on Monday, under the following bargains then set:—The 32 east to four men, at 110s. per fm., and since which the lode has much improved, the last 3 ft. being now a good mixture of lead and blende ore. The 32 west is not yet set; we must first clear up the stuff broken from the stopes in back of the 32 and sides of winze during the time the water was being got out. I have set six men to stop the back of the 32 east and west of winze, 12 fm., at 4s. per fm.; the lode will yield from 10 to 12 cwt. of lead ore per fm. The mason is getting on with the walls for drawing-machine. If you will send me forms for sample notes we can sample 20 tons of good quality ore.

CRANE.—H. Skewis, Dec. 10: The lode in the 60, west of engine-shaft, is 18 inches wide, composed of spar, mundic, jack, and occasional stones of copper ore. The lode in the rise in back of this level is 18 in. wide, composed of spar, mundic, and stones of copper ore, with a very promising appearance.

The lode in the shaft sinking below the 50 is 20 in. wide, worth at present 107 per fm.; here we shall lay open some tribute ground. The lode in the 50, west of engine-shaft, is 3 ft. wide, composed of spar, mundic, and jack, intermixed with copper ore, but not enough to value. In the 50 cross-cut north, towards the Brigant lode, which is over the sylvan course, we have had some branches of spar and mundic, and a quantity of water coming out of the ground. These are strong indications we are approaching near a lode or branch, which appears to be gone off north in the 30. The lode in the 10, west of whinstone, is still small and unproductive; the ground is favourable for driving; there are about 10 fms. more to drive before sinking a winze on the tribute pitches in back of the 20. There is nothing new in the cross-cut south of Bejewas lode, and the ground at present is hard for driving. There are 20 men working on tribute varities varying from 7s. to 13s. 4d. in 17. We expect to sample 20 tons of copper ore next week, which we hope will realise about 2000.

CUDDRA.—A. Candy, Dec. 12: Tickell's 100 fm. level has been driven west by the side of the lode about 5 ft. No lode has been taken down this week, but when last taken down we found it very good for tin. This discovery speaks well for the western part of the mine. In No. 1 stope, in the 60 fm. level, the lode in the west part of the stope is 6 ft. wide, and worth 2 1/2 cwt. of tin per 100 sacks. In No. 2 stope the lode is 6 ft. wide, and worth 1 cwt. of tin per 100 sacks. The winze sinking in the bottom of this level is down 2 fms. 1 ft. The lode is 6 ft. wide, composed of quartz, peach, and capel, with a small quantity of tin, but nothing to value yet.—Walker's Shaft: We commenced on Monday morning to take down the lode, which is about 4 ft. wide, and worth about 7 cwt. of tin per 100 sacks. In the winze sinking west of Walker's, at the same level, the lode is about 2 ft. wide on the tin part, and worth 2 cwt. of tin per 100 sacks. In the stope in back of this level, west of shaft, the lode is 3 ft. wide, and worth about 1 1/2 cwt. of tin per 100 sacks. The 60 end is being driven west, by four men, in killes, at 4s. per fm. In the winze sinking in the bottom of the 50, north of Parry's shaft, the lode is 4 ft. wide, and worth 2 cwt. of tin per 100 sacks.

DEVON NEW COPPER MINE.—P. Hawke, Dec. 10: I find by the change of underride in the great north lode, between the 78 and the 88, that the junction of the same stope, I examined minutely the course the ore seems to take, and I felt persuaded that it might be cut into the north. After working some hours, I am happy to say that we broke through to the productive part, and the product is quite as good as the samples sent to town from the stoping of the leader, which is scarcely second to any copper ore as to quality. I have put the men to stop the side and back of the level upon a splendid prospect, which may be considered a good lode—in fact, the men wanted to take it on tribute, but this must be deferred for a week or two, in order to ascertain its real value.

DOLCOATH.—C. Thomas, W. Pritchard, J. Tonkin, J. Thomas, Dec. 9: South Part of Main Lode: The engine-shaft is sunk 4 fms. below the 266, the lode is unproductive. The 220, west of Dunning's garden shaft, is worth 12s. per fm. The 210, west of Dunn's garden, is worth 18s. per fm. The 210, east of new east, is worth 12s. per fm. Harriet's shaft is sunk 7 fms. below the 190, and is worth for copper and tin 25s. per fathom. The 190 east, towards the valley main lode, is progressing favourably. The 160, west of Wheal Killas, producing good stones of copper ore.—North Part of Main Lode: The 266, west of engine-shaft, is worth 50s. per fm. The 266, east of engine-shaft, is worth 60s. per fm. The 254, west of engine-shaft, is worth 40s. per fm. The 254, east of engine-shaft, is worth 14s. per fm. The 242, west of new east, is worth 10s. per fm. New east shaft, under the 242, is worth 18s. per fm.; we expect this will be holed to the 254 in less than two months. The 230, east of new east, is holed to the winze under the 210; the lode is worth about 18s. per fm.—North Entral Lode: The 20, west of cross-cut, North of Rule's shaft, is unproductive. The balance of the cost of new engine, pitwork, &c., is charged to-day, the whole of which is upwards of 60000. We are still raising about the same quantity of tin—80 tons a month.

DRAKE WALLS.—Thos. Gregory, Dec. 12: In the 102, east of Matthews's shaft, the branches are producing saving work, and very promising. In the 92, east of Matthews's, the branches are worth 7s. per fm. The branches in the Tye level east are worth 8s. per fm., and laying open profitable ground. In the 80, west of Betteley's, we have passed through the cross-course, to the west of which we have broken some fine stones of tin; probably it will take a week to intersect the main branches, west of said cross-course. The branches at the 60, west of Bremont's, continues to produce good work, worth 17s. per fathom. At the 50 and 40 west we have no change to notice; the ends are producing good work, and the western part of the mine continues to open up very satisfactorily.

DYNGWYM.—E. Davies, Dec. 10: In the 70 fm. level stope continue quite as productive as before; as also in the 60. The 50, driving east, again opens up an ore lode; the stope in the back are as productive as before. No change in the 40 or 32 fm. levels; the latter continues to open on a good course of lead ore. The drawing and dressing goes on well.

In Cyfarthfa level the newly-discovered lode has been further explored, and is a very important discovery, as it forms junctions with the two main lodes we are driving, for it will have an important influence on them: irrespective of this, the quantity of such excellent ore that it contains guarantees a rich lode below this level. We have been very fortunate in the choice of position of this level; it is driven across those points that were favourable to the production of lead ore, and the results already obtained show that we were right. Every fathom yet driven has shown some interesting features in a geological and mineralogical point of view.

EAGLEBROOK.—H. Tyack, Dec. 10: We have cut through the hard ground which we have in our 30 fm. level, where the lode is more congenial for making a good deposit of ore, the vein being composed of nice soft spar, mixed with a considerable quantity of carbonate of lead; this end is being driven by four men. Our 20 fathom level is being pressed forward with the utmost vigour by six men; the lode in this end is exceedingly strong, and yielding from 16 to 20 cwt. of lead ore per fm., with every prospect of its continuing for a great distance. A cross-cut has been driven to the west of the engine-shaft in the 10 about 11 fms. south, but as we are not certain that we have met with the right south lode it is very desirable that this should be continued a little further, so as to make certain of this point, and I have put two men to carry on this work. All the machinery is in good order, and working well.

EAST ABRAHAM.—H. Cowling, Dec. 10: We have commenced operations at this mine, and shall speedily have the shafts in working order and the level clear, when I anticipate raising good quantities of copper ore. According to the statement made by the old men who formerly worked in these mines, there is a fine course of ore near the boundary of Wheal Abraham dipping towards our ground. A level is driven upwards of 100 fathoms on the course of this lode in East Abraham, and the ground standing whole to surface about 45 fathoms. I am daily having applications for tribute pitches, but prefer to see the extent of the ore ground opened first myself, also to ascertain the value of the lode in the bottom of the level, which is stated to contain a rich course of ore. It is near 50 years since this work was commenced; the copper ore at that time realised 34s. per ton, at a standard of 80s. for fine copper. The Crenvay and Wheal Abraham United Mines are taken up by an influential company, with a capital of 100,000l.; their working will greatly facilitate our operations, inasmuch as expensive pumping machinery will be dispensed with, and enable us to raise large quantities of ore at a comparatively small cost. It will be remembered that the yield of copper ore from Wheal Abraham at the former working exceeded in value that of any other mine in Cornwall, amounting to above two millions sterling. East Abraham contains the same run of lodes, and will, from all appearance, become as productive and profitable to the shareholders, and I have no hesitation in saying that all who invest in this mine will be richly rewarded by a lasting and increasingly valuable property.

J. Thomas (Camborne): East Abraham Mines are a continuation of the run of rich copper lodes of Old Abraham and Crenvay, which champion lodes are going through the centre of your sett. There are three lodes opened in the adit level that will let on tribute for copper ore. These lodes in the 45 are oxidising, and the sides of the level are quite green with the oxide of copper. I worked in the Wheal Abraham when a young man, and was one of the partners working at the adit level near the boundary east, from which we broke thousands of pounds worth of copper ore within a few fathoms of your ground. The old mine is again taken up by an influential company here, and will benefit East Abraham very considerably, as this mine will be worked dry, requiring but a small expenditure beyond the present cost to bring the mine into a dividend state, and will gladly take an interest in the mine, having seen the lodes, and knowing them to be a continuation of the same productive lodes as in the adjoining property.

EAST BEAM.—J. Webb, jun., Dec. 12: Owing to an increase of water in the eastern shaft we are obliged to suspend sinking, and have put the men to finish the clearing of his adit.

EAST BUDNICK.—W. H. Reynolds, Dec. 11: In the 17 end west the lode is 12 to 15 in. wide, and yielding 6 cwt. of lead per fm.

EAST CARN BREA.—T. G.ianville, Dec. 11: In the 26, driving east, the lode will produce 3 tons of ore per fm., worth 12s. per fm. In the 50, east and west of the cross-cut, no lode has been taken down during the past week. In the winze below the 40 the lode will produce 3 tons of ore per fm.; we are now to water in the winze, which will prevent us sinking before the 50 end is further advanced. In the 40 driving east from the western shaft, the lode will produce 3 tons of ore per fm. In the 30, east of the western shaft, the lode will produce 1 1/2 ton of ore per fm.

EAST DEVON GREAT CONSOLS.—T. Richards, Dec. 10: In the 52, driving west on the south part of the lode, from 4 to 5 ft. wide, is of a very promising character, and in easy ground for driving. In the 40, east of south cross-cut, the lode is 2 to 3 ft. wide, composed of spar, prian, mundic, spotted with lead and copper ore; a slide appears to have come in contact with the lode, causing it to take a more southerly direction than hitherto; the ground continues very favourable for driving.

EAST PROVIDENCE.—T. Ures, Dec. 10: Boorman's shaft is sunk 3 fathoms below the 30. The lode here continues to yield good stones of tin. Twelve men are now engaged sinking this shaft as fast as the nature of the ground will admit. No time will be lost in getting it down to the 40, as that level is likely to make a very productive one. The winze below the 20 is 18 in. wide, worth 8s. per fm.; the lode here has a beautiful appearance, worth 12s. per fathom. The 30 is driving east from Boorman's shaft by six men, at 8s. per fm.; lode 12 inches wide, worth 8s. per fathom, and showing indications of improvement. About 2 fathoms more driving will bring this end under the above-mentioned winze sinking below the 20. The 30 west is driving by six men, at 8s. 10s. per fm.; the lode in this end at present is small, producing a little tin, but not much to value.

EAST ROSEWARNE.—J. James, Dec. 7: In the 55 east the lode is disordered at present, consequently declined in value; we think this is a temporary change, and that it will shortly improve. In the 55 west the lode is 15 in. wide, worth 8s. per fm.; this being in hard silvan, we may expect a good improvement as we get out of it, which we hope to do shortly. We have set a stope in the back of this level, at 4s. per fm., where the lode is 1 ft. wide, worth 10s. per fathom. In the 45 east the lode is 1 ft. wide, worth 10s. per fm. In the 45 west the lode is 1 ft. wide, of a very promising character, composed of mundic, quartz, and copper ore. In the stope below the 45 west the lode is 16 in. wide, worth 20s. per fathom. There is no change to notice in the 45 cross-cut, south of King's. The pitches in the back of the 45 east are improved. There is no other change of importance in the tribute department.

EAST TYWARTHNAHAIL.—Capt. R. Kendall (Dec. 4), of Charlotte United, writes as follows:—I am acquainted with the ground comprised in East Tywarthnaile Mine, and from what I have seen of the lodes and stratum I think you have a first-rate piece of mining ground, and particularly so if you look at your position, with so many lodes and cross-courses, and a dry mine to the 30 fm. level. You have only to put up a horse-whim to draw the stuff, and you can bring copper ore into the market very quick, and a small capital will bring this mine into good working order. This ground is surrounded by some of the best mines in the county, and if speedily and carefully developed you have one of the best chances in the county for mining operations, and it will, I have no doubt, in a very short time be one of the best mines in the country.

EAST WHEAL GREENVILLE.—G. R. Odgers, W. Bennetts, Dec. 11: We have not taken down any lode in the engine-shaft since our last; where pricked into the ground, and from what I have seen of the lodes and stratum I think you have a first-rate piece of mining ground, and particularly so if you look at your position, with so many lodes and cross-courses, and a dry mine to the 30 fm. level. You have only to put up a horse-

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EAST WHEAL GREENVILLE.—G. R. Odgers, W. Bennetts, Dec. 11: We have not taken down any lode in the engine-shaft since our last; where pricked

large amount of tin ground for stoping, and of better quality than the stopes over the levels above. The 140, west of the winze, is worth over 200. per fm., and we have much pleasure in stating that our sales of tin will be on the increase.

**NORTH MINERA.**—W. T. Harris: The engine-shaft is down nearly 5 fms. below the 35; the ground is good for progress, consisting of quartz and chert mixed, and the water very easy, which, should it continue another two months, will see us deep enough to deep enough to commence driving out our levels east and west; the joint is still across the shaft, and of a very promising character. The eastern shaft is down nearly 15 fms. from surface; the lode, which is nearly 2 feet wide, is of a most promising character, and produces excellent stones of lead ore; I anticipate a great improvement here daily. At Wilson's shaft, in the north level, the lead holds good, with every prospect of a continuation, producing 2 tons of lead ore per fm.; the south end produces a little lead, but the ground is very bad for progress. The 40 yard level, east of Charles's shaft, is without much alteration, producing from 3 to 4 tons of lead per fathom. The level on the caunter lode in the 35 yard level is producing from 3 to 4 tons of lead per fm. The flat throughout is producing on an average from 1½ ton to 2 tons of lead per cubic fathom, with every prospect of a continuation. No other alteration in the mine since last report. Our dressing is being pushed on as fast as circumstances will permit; and we have this day weighed off 20 tons of lead ore, and shall get another parcel for sale as fast as possible.

**NORTH WHEAL ROBERT.**—W. Godden, Dec. 12: The lode in the 42 fm. level, east of Crowe's winze, is improved, and is now looking very promising. There is no material alteration in any other part of the mine.

**NORTH WHEAL TRELAWNY.**—H. Hodge, H. Harvey, Dec. 12: The cross-cut at the 76 is extended west of Mager's shaft 5½ fms. towards the lode. We have intersected a lode in the 65 cross-cut west, and have cut into it 2½ ft.; it is composed principally of horn-spar, quartz, prian, mudi, and lead, but not enough of the latter to value; we have cut through the junction of the two lodes. There is every appearance that we shall see a change here soon by these strings, or feeders, dropping into the lode so quick, and the Tyne Bottom limestone will be coming in thicker than ever now, and lode will be in more strength.

**ST. IVES WHEAL ALLEN.**—H. Taylor, Dec. 12: At Gieseler's engine-shaft, sinking below the 50, the lode is 12 in. wide, poor at present. In the 50, east of Gieseler's, on the carbona, the lode west of sump-winze is 4 ft. wide, worth from 120. to 140. per fm.; this lode has a very promising appearance to make large deposits of tin at a greater depth. The carbona lode south is 18 in. wide; we cannot work this until we open more ground on the western carbona. The carbona lode, 11 fms. west of the above, is 12 in. wide; we have not opened enough of this to ascertain its value. In the 30 fm. level, east of Gieseler's, the lode is 20 in. wide, worth from 200. to 250. per fm. At Richards's shaft, on the deep adit, the lode is 2 ft. wide, worth 30. per fm.; here we have not made much progress, owing to so much slate to clear. We are getting on with the stamping of the timber and the burning-house as fast as possible. The mine never looked better since we have been working it than at present. We have unbottomed the former workings.

**TEES SIDE.**—R. Bray, Dec. 12: In driving east on Hardships' lode the lode and ground is improving; yesterday, the men making a new cut in, discovered another strong string of ore coming in from the north part. This is the most promising vein since we cut through the junction of the two lodes. There is every appearance that we shall see a change here soon by these strings, or feeders, dropping into the lode so quick, and the Tyne Bottom limestone will be coming in thicker than ever now, and lode will be in more strength.

**TOLCARNE.**—Dec. 11: Field's Lode: At Field's shaft, sinking below the 30, the lode is 2½ ft. wide, composed of spar and gossan, and spots of ore. The lode in the 30 east is 18 in. wide, unproductive. In the 30 west the lode is 18 in. wide, composed of spar, gossan, and prian, with spots of ore. The lode in the 20 west is 15 in. wide, unproductive. In the 20 east the lode is 20 in. wide, worth 1 ton of ore per fm. The lode in the 10 east is 1 foot wide, composed of gossan and prian, with spots of black ore. The lode in the winze sinking in the bottom of the 10 east is 1 ft. wide, composed of gossan and spar. The lode in the adit east is small and unproductive. Enthoven's Lode: In the stopes in bottom of the adit level the lode is worth for the 250. per fm.

**TREFFERY CONSOLS.**—J. Phillips, Dec. 12: Our cross-cut is driven 7 fms., and east the lode is 20 in. wide, composed of barytes, mudi, and lead, worth for the latter full 3 cwt. of lead to the lode; a more promising lode cannot be seen; it is only now seen in the cross-cut; we shall drive both ways on its course to ascertain its real value.

**TREHILL.**—H. Richard, Dec. 9: On Saturday last I set the 50 to drive west, by six men, at 3½ fms. per fathom; the ground being very easy for driving, I believe we are on the eve of cutting the cross-course, as the ground seems to be much broken up, and more water coming from the end. This cross-course has taken a more perpendicular dip below the 40, otherwise we should have reached it before. We have about 2 fms. 3 ft. more to sink Rapson's winze before communicating with the 40 cross-cut; after a communication is made we shall raise good quantity of fair quality copper ore. All the machinery is working very well.

**TRELOWTH.**—T. Richards, Dec. 12: We have driven the 144 end east of Cole's engine-shaft 4½ fms., and find the ground easier, but we have not taken down any lode. The 144 end west is driving on the north side of the lode, which contains a little copper ore. In the 134 end east the lode is hard and poor. In the 134 end, west of Cole's, it is stopping towards the bottom of the level, where the lode is worth 200. per fm. In the 134 end, east of the cross-cut, the lode is worth 180. per fm. The sump-winze sinking in the 124 is worth 150. per fm. The first stop, east of sump-winze, is worth 200. per fm.; the second stop, east of sump-winze, is worth 200. per fm.; the stop west of sump-winze is worth 120. per fm.

**TRUMPET UNITED.**—G. R. Odgers, Dec. 7: The engine-shaft to sink below the 25, by six men, at 160. per fm.; lode 8 in. wide, and yielding a little tin, with stones of wolfram. The 25 west, to six men, at 80. per fm.; lode 9 in. wide, and looking more kindly than for some time past; this is about 12 fms. behind the lode discovered in the level above, and which we are hurrying on as fast as possible. The 15 west, to four men, at 42. 4s. per fm.; lode from 20 in. to 2 ft. wide; to-day we sampled the produce of the last 2 feet driving, and it yielded 9 cwt. 1 qr. of black tin per 100 sacks, or, in other words, full 150. per fm., and showing every indication of continuing; this is a kindly lode. The eastern flat-rod shaft, on the middle lode, to four men, at 102. per fathom—lode small. The cross-cut south of the flat-rod lode, at the 20, to two men, at 22. per fm., the ground being easy, with branches of spar dipping towards the lode—a favourable sign; and west of cross-course on the lode, to two men, at 21. per fm.; lode from 1 ft. to 18 in. wide, alive for tin. To carry out the above operations we have been obliged to take on four extra men, and our principal object is to get back under the tin lately discovered.

**UNITED MINES (Tavistock).**—J. Tucker, Dec. 11: The ground in the 72 east is now very easy for progress. The lode in the 60 east has somewhat improved. There is no other change to notice in the mine.

**VALE OF TOWY.**—A. Waters, T. Harvey, Dec. 10: Clay's engine-shaft is down 11 fms. below the 100, and the men are squaring the ground preparatory to casing and dividing the shaft to the bottom. It will take another fortnight to get forth out of the lode of whin-shaft, and to admit of our opening a section of the great lode at this point. You may rest assured that everything towards the accomplishment of this object is being pushed on with vigour.

In the 100, driving north of shaft cross-cut, the lode is 13 in. wide, in which the lode is 10 ft. wide, composed of sulphate of barytes, 2 tons of blonde per fm., with good stones of lead ore intermixed; this is a very fine working lode, and it shall be very much surprised if we do not find considerable bodies of lead below the present point. In the 80, north of Clay's, the lode is influenced by the cross-course, and is without ore to value. The lode in the new adit, south of Nante, is 15 ft. wide, with flashes of lead ore throughout the barytes. The country rock is very favourable for the production of lead ore. All our engines and pitwork are in first-rate condition.

**WEST OF CLAY.**—A. Waters, T. Harvey, Dec. 10: The lode in the 60 east is being driven, to six men, at 80. per fm.; lode 8 in. wide, and yielding a little tin, with stones of wolfram. The 25 west, to six men, at 80. per fm.; lode 9 in. wide, and looking more kindly than for some time past; this is about 12 fms. behind the lode discovered in the level above, and which we are hurrying on as fast as possible. The 15 west, to four men, at 42. 4s. per fm.; lode from 20 in. to 2 ft. wide; to-day we sampled the produce of the last 2 feet driving, and it yielded 9 cwt. 1 qr. of black tin per 100 sacks, or, in other words, full 150. per fm., and showing every indication of continuing; this is a kindly lode. The eastern flat-rod shaft, on the middle lode, to four men, at 102. per fathom—lode small. The cross-cut south of the flat-rod lode, at the 20, to two men, at 22. per fm., the ground being easy, with branches of spar dipping towards the lode—a favourable sign; and west of cross-course on the lode, to two men, at 21. per fm.; lode from 1 ft. to 18 in. wide, alive for tin. To carry out the above operations we have been obliged to take on four extra men, and our principal object is to get back under the tin lately discovered.

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n the 120, west of Tilly's shaft, is 2 ft. wide, impregnated with ore, but nothing to value. During the past month the south lode in the 70, west of Bull's, has been split, and the lode disordered; the two parts are again come together, and although there is nothing in the lode at present to value, yet we are in full expectation of an improvement at this point. The slopes in back of the 70, west of Bull's shaft, will produce 6 tons of copper ore per fathom. The 80, west of Bull's shaft, which is several fathoms behind the ore gone down in bottom of the 70, is unproductive. We have one stop working for tin in the back of the 130, south from Tilly's shaft, worth 14s. per fm. In order to develop our recent discoveries as early as possible, we have increased our tutwork and other laborers about fifty.

WHEAL SICILY.—J. Symons, Sept. 9: I am happy to say the mine is now in fork, and the men working. I have got in fork this morning at five o'clock, and can keep the water very well. I think we shall have an improvement in the eastern end shortly. There has been nothing done in the western end, in consequence of a run in the back of the level, which we shall soon clear. The wheel and pitwork are in good working order.

WHEAL TRELAWNY.—Dec. 7: The lode in the 175, south of Smith's shaft, is worth 6s. per fm. The lode in the 175, north of Smith's shaft, is worth 4s. per fm. The lode in the 160 south is looking better, and is now worth 6s. per fm. The 160 north is held to Chippendale's shaft; this communication has well ventilated this part of the mine, and has also opened up tribute ground. The 150, south of Smith's shaft, is worth 11s. per fathom. The winze sinking below the 150 is worth 10s. per fm. We have holed the winze to the 140, at Trelawny's, which has opened up a valuable piece of ground, the lode being worth 20s. per fm. The lode in the 140, at Trelawny's, is worth 12s. per fathom. Smith's shaft is down 11 fms. 3 ft. below the 172, and as soon as we have cut plait, &c., it is our intention to put out a cross-cut to intersect the lode at the 180. We have great satisfaction in being able to inform you that we have effected the communication between the north and south mines, which has not only greatly facilitated our mode of working, but has also enabled us to set several new tribute pitches at very moderate tributes. We are getting on very well with our next sampling, which will be about the usual quantity. Our pay and setting passed off satisfactorily. This mine sold on Saturday last 73 tons of lead ore, at 25s. 6d. per ton.

WHEAL TREMAYNE.—R. Williams, J. Williams, Dec. 7: At the boundary engine-shaft, the rise in back of the 130, on the engine lode, the lode is 7 in. wide, yielding low price tin-stuff. In the 123, east of Allen's shaft, on Allen's branch, the lode is worth 20s. per fm., with a favourable appearance for a good run of tin ground ahead. In the skip-shaft, sinking under the same level, on Allen's branch, the lode is improved, worth 15s. per fm. In the 113 fm. level cross-cut, north-east of the same shaft, in search of north branches, we have not cut anything to notice; the ground is looking favourable. The slopes in back and bottom of the same level, on Allen's branches, are worth on an average 12s. per fm. In the 108, east of the same shaft, on Allen's branch, the lode is worth 8s. per fm. The slope in back of the same level is worth 9s. per fm. We have eight men opening ground, and fixing skip-road in the 98 and below the 108, which is progressing favourably. The shaftmen at the new engine-shaft are cutting bearer-holes in the 53 and 25. The engineers and carpenter are progressing with the different erections as fast as the weather will allow.

WHEAL UNION.—T. Glanville, Dec. 11: In the 46, driving east of Moyle's shaft, the Turnpike lode is 3½ ft. wide, worth 50s. per fm., with every appearance of improving. In the flat-red shaft the lode is 18 in. wide, producing good stones of copper ore. Nothing new in the other parts of the mine to report on.

WHEAL UNITY CONSOLS.—W. H. Reynolds, Dec. 11: In the 85, east of the shaft, the lode is 12 in. wide, yielding good stones of ore, and appears likely to improve. In the 75 cross-cut north we have cut through the lode, which is 4½ or 5 ft. wide, with a little copper, and looking very promising. In the 50, west of cross-cut, the lode is 3½ feet wide, and for 12 in. against the north wall it contains black ore, and is likely to go better. In the 50 cross-cut south the men are making fair progress in driving. The pitchers are yielding fair quantities of ore.

WORVA'S DOWNS.—R. Harry, Dec. 11: I beg to inform you that I have put the four shaftmen to clear the shallow adit level, and with good speed I think they will complete it by the end of this month. The deep adit end east I have set to four men on tribute, at 10s. in 11, they paying all cost. The lode here is very promising, and I have no doubt it will improve as we advance east. The 10 east, driving by one man and one boy, continues much the same as when I last wrote you, except there is a little more water issuing from the end, which we regard as a favourable indication for tin. We are keeping the water with one engineman; engine consuming about 10 cwt. of coal per day.

YARNER.—R. Barwick, Dec. 11: The 40 east is still in disordered ground; we are now turning the end a little south to see what is in that direction. The 40 west and 30 west will each yield 2 tons per fm. The slope west of shaft, in the back of the 30, will yield 3 tons, and the one east of shaft 4 tons per fm.; no lode taken down in the winze sinking below the level during the week. We are now preparing the timber for the new engine-shaft, and intend to resume the sinking of it to-morrow morning, set to six men, at 4s. per fm. for the month.

THE CARDIGANSHIRE CONSOLIDATED MINING COMPANY.—The company have received a letter from the resident agent at the mines, dated the 10th inst., in which he says—"Since writing my report this morning I have had more of the lode taken down in the adit, driving east on copper lode, and I am glad to say that it is looking very good; the north part of it, for about 1 ft. wide, being of the same quality as the specimens to be sent for your inspection by to-morrow's post." The copper ore of these mines is very rich, fetching about the same price as the lead ore. The undertaking continues to attract much attention, and notwithstanding the general stagnation, the shares have been quoted during the last at 3s. to 4s. per min.

LADY BERTHA.—This mine is improving, and looks better now than it has done for a considerable period. There is a pitch in the back of the 30 east worth 35s. per fathom, and the lode in the end is worth 12s. per fm., and improving. There has also been a considerable quantity of ore laid open in the 41, both east and west, and the lode in the 53, now approaching this run of ore ground, is coming in very kindly, and easy for driving. This must be considered a most important feature in the mine, and speaks well for its future success. The shares are at present at a price far below their value, and a great rise may be calculated on with certainty. There is a cross-course to the eastward of the present workings, which has no equal in the whole county, and against which all miners have asserted their belief that large deposits of ore would be found. The committee are considering the propriety of exploring the lode in this direction by opening a new shaft, and should they decide on doing there is no doubt whatever of speedily meeting good results.

SCHOOL OF PRACTICAL GEOLOGY—PHYSIOLOGY.—Professor Huxley, F.R.S., gave his ninth lecture on the above subject on Saturday last. He showed that the result of the sensory apparatus was to bring the impulses derived from the outward world to the extremities of the nerves, and to give rise to a decided change, which is sometimes a muscular contraction, and in others a state of consciousness. He then showed how this may be modified, and the circumstance which arise. He remarked that there is a limit to sensibility, and referred to the observations of Weber in this field of enquiry. The lips and the tips of the fingers are the most sensitive parts of the body, while the back of the limbs are the dullest. The lecturer then treated on the limits of the auditory organ, and added that the same reasoning holds good in reference to the most active of all the senses, that of sight. He then proceeded to analyse the sensations, concluding that many we consider as simple are really complex. After dwelling at a considerable length on the illusions of the sense, he described the pseudoscope of Prof. Wheatstone.

At the Geological Society, Prof. Tennant exhibited some specimens of gold in quartz veins, of gold-dust, and of gold ingots, from Nova Scotia, sent by Mr. Secretary Howe. At the meeting on Wednesday, the following papers will be read:—"On the Carboniferous Limestones of Farlow and Oretton, Clee Hills, Shropshire," by Prof. Morris, V.P.G.S., and Mr. G. E. Roberts; and "On some Fossil Plants, showing Structure, from the Lower Coal Measures of Lancashire," by E. W. Binney, F.R.S., F.G.S.

RATING OF MINES.—It appears likely that the Vale of Towy Mining Company will have some difficulty to obtain exemption from income tax, though, as the shareholders are but well aware, profits have been long unknown to them. Capt. Arthur Waters has had to appeal to the Commissioners at Llantarnam; yet, owing to the obstinacy and erroneous statements of the surveyor, two out of three of the commissioners decided upon confirming the assessment in the absence of documents which the surveyor called for; though he distinctly declared to Captain Waters that they would not be required at the hearing. The company have now to apply to the board. No doubt is entertained of the application proving successful, but it is complained that the company has had much unnecessary trouble.

THE SPELTER TRADE.—In the report of the General Mining Company for Ireland, the directors congratulate the proprietors on the successful working of the machinery erected for the dressing of the company's great deposit of calamine. Referring to the report of Capt. Roberts, the agent at the mines, the directors observe that the average percentage of metallic zinc now obtained is 39 per cent., and this, it is remembered, from ore dressed by workpeople who were only being taught their business, and who are now daily acquiring greater proficiency. The calciners are completed, and will very shortly be at work. When they are so the company will be in a position to supply, with the utmost regularity, any smelters who may enter into arrangements with them with an ore of a uniform percentage, not falling much below 50 per cent. of metal by assay. The directors lay stress on the fact of the supply being regular, and the quality uniform. One great disadvantage which the spelter makers of England have hitherto laboured under has been the circumstance that they have had to trust to precarious sources, no large deposit of calamine, but that belonging to this company having as yet been discovered in the United Kingdom. To this cause is to be attributed the fact, notwithstanding the great advantages which English manufacturers possess in point of cheapness of coal, the spelter trade in England has not acquired the importance which, relatively with lead and copper, it has upon the Continent, where there are great deposits of calamine precisely similar in character to that at silver mines. Another advantage which the smelters will derive from the use of the company's ore is that the spelter made from calamine is much more malleable than that made from blende, and will, consequently, so soon as its character becomes known and appreciated, command a higher price. It is matter of notoriety that during the greater portion of the present year the trade in almost all metallic substances has been seriously interfered with by the civil war in America. Spelter has been no exception to the rule, the price having fallen from 20s. per ton to so low as 15s. When it touched this latter price a reaction set in, and there are now buyers at about 19s. Whilst the market was in the depressed condition alluded to, the directors deemed it best not to press any sales of ore, and there is consequently much less sold in the half-year than would otherwise have been the case. The directors have, however, made such arrangements as shall give them the power of increasing the supply as the demand increases.

THE SPELTER TRADE.—Messrs. Berger report—This metal has suffered more than any other through the general stagnation in the metal trade. During the month business has been very limited, and the anxiety of war with America has acted unfavourably on the article in Hamburg as well as Breslau, where prices have receded considerably, our market being similarly affected. The quotations, however, are now very low compared to former years, and a little *bona fide* demand will soon improve our prices:—Stocks on Dec. 1, 1861, 5176 tons, price from 21s. 0 to 21s. 5 0  
ditto 1860, 5137 " " 12 12 0 " 19 15 0  
ditto 1859, 3429 " " 21 6 0 " 21 2 6  
ditto 1858, 4497 " " 22 0 0 " 22 5 0

LONDON GENERAL OMNIBUS COMPANY.—The traffic receipts for the week ending December 8 were 10,214s. 19s. 7d.

\* \* With last week's Journal we gave a SUPPLEMENTAL SHEET, which contains—Reviews of Dr. Percy's New Metallurgical Text-Book, and Mr. Smiles's "Lives of the Engineers"—also papers on Remarkable Mineral Deposit; Steam on Steep Roads—Important Improvements; Prosper United Mines; The Mining District in which East Wheal Seton is situated, with map; Improved Prospects of English Investments on the Continent; Furnaces; the Government Guarantee on Indian Railways; Economic Railway; Water Locomotion; Locomotion on Common Roads; Mining in Cumberland; Artificial Stone, and Preservation of Timber, &c.

\* \* With the MINING JOURNAL of Nov. 23 we gave a SUPPLEMENT, which contains—The School of Mines, Andersonian University, Glasgow; Miners' Association of Cornwall and Devon; Cornish Mining; Pyrites; Observations on the Coal Mines of Belgium—No. III.; Coals Classified; Great Tywarnhaile Mining Company; On the Internal Heat of the Earth; The Telegraph to India; A New American Gas Coal; Victor Emmanuel Mine; St. John del Rey Mine; Steam-Engines and Boilers; Lanbarry Hematite Iron Ore Company; Water as a Fuel; Letts's Diaries; &c.

## The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, December 13, 1861.

COPPER.	BRASS.	PER LB.
Best selected . . . . . p. ton 110 10 0 —	Sheets . . . . .	10d.—11d.
Tough cake . . . . . " 107 10 0 —	Wire . . . . .	10½d.—
Tit . . . . . " 107 10 0 —	Tubes . . . . .	10½d.—11½d.
Burra Burra . . . . . " 104 0 0 (Nom.)		
Copiapo . . . . . " 98 0 0-100 0 0		
Copper wire, p. lb. 0 1 2 —		
ditto tubes . . . . . " 0 1 3 —		
Sheathing & bolts . . . . . " 0 1 0 —		
Bottoms . . . . . " 0 1 1 —		
Old (Exchange) . . . . . " 0 10½ —		

IRON. PER TON.

Bars, Welsh, in London . . . . . 6 5 0 —	SWEDISH.	Per Ton.
Ditto, to arrive . . . . . 6 0 0 —	Ditto, in kgs (rolled) 15 0 0 —	(hammered). 15 10 0-16 0 0
Iron rods . . . . . 7 0 0 —	Ditto, in faggots . . . . . 16 0 0-17 0 0	
Stafford, in London . . . . . 7 0 0-7 10 0 —	English, Spring . . . . . 18 0 0-23 0 0	
Bars . . . . . 7 5 0-8 0 0	Beesemore, Engineers Tool 44 0 0 —	
Hoops . . . . . 8 10 0-9 0 0	Spindles . . . . . 30 0 0 —	
Sheets, single . . . . . 9 0 0-9 10 0	QUICKSILVER . . . . . 7 0 0 p. bottle	
Pig, No. 1, in Wales . . . . . 3 0 0-4 0 0		
Refined metal, ditto . . . . . 4 0 0-5 0 0		
Bars, common, ditto . . . . . 5 0 0 —		
Ditto, merchant, in Tees . . . . . 6 10 0 —		
Ditto, railway, in Wales . . . . . 5 5 0 —		
Ditto, Swed. in London . . . . . 11 10 0-12 0 0		
To arrive . . . . . 12 0 0 —		
Pig, No. 1, in Clydes . . . . . 2 8 0-2 18 0	TIN-PLATES.	
Ditto, f. o. b. in Tees . . . . . — —	IC Charcoal, 1st qua. p. bx. 1 8 0-1 9 0	
Ditto, forge, f. o. b. in Tees . . . . . — —	IC Ditto 1st quality . . . . . 1 14 0-1 15 0	
Staffordshire Pig . . . . . 3 10 0-3 12 6	IC Ditto 2d quality . . . . . 1 4 6-1 6 6	
Welsh Forge Pig . . . . . — —	IC Ditto 2d quality . . . . . 1 11 0-1 13 0	

LEAD. LEAD.

English Pig . . . . . 20 0 0-21 0 0	TIN-PLATES.
Ditto sheet . . . . . 21 0 0 —	IC Charcoal, 1st qua. p. bx. 1 8 0-1 9 0
Ditto red lead . . . . . 22 10 0 —	IC Ditto 1st quality . . . . . 1 14 0-1 15 0
Ditto white . . . . . 28 10 0-30 0 0	IC Ditto 2d quality . . . . . 1 4 6-1 6 6
Ditto patent shot . . . . . 22 10 0-23 0 0	IC Ditto 2d quality . . . . . 1 11 0-1 13 0
Spanish . . . . . 19 10-19 15 0	IC Coke . . . . . 1 2 0-1 2 6

At the works, 1s. to 1s. 6d. per box less.

REMARKS.—The extreme dullness noticed in our last week's report, has now given place to a somewhat better feeling. As the novelty of our position with regard to America wears off, business again resumes its course.

Metals have, however, suffered from the effect of the temporary cessation of trade, and in some instances have declined considerably. Our market is still extremely quiet; shippers, in consequence of the existing uncertain state of affairs, limiting their purchases to actual orders, but it is gradually gaining more strength.

COPPER.—The fixed price of English remains without alteration, but there are some sellers of second-hand parcels under price; the demand is at the present moment very small. Accounts from India, however, come over rather better by this Mail, which will, no doubt, create more enquiry for shipment to that country. Foreign is inactive, but tolerably firm at the following quotations:—Burra Burra, 103s.; Copiapo, 98s.; Spanish, 95s. to 96s.; Chili, 92s.

IRON.—Rails continue very slow of sale at 5s. to 5s. 2d. f.o.b. at the works. Merchant bars in quiet request, price a trifle easier, 5s. 5s. at the works, and 5s. 17s. 6d. to 6s. f.o.b. in London. Staffordshire descriptions show a rather improved demand, chiefly for India, prices are unaltered. Swedish bars continue firm at quotations; the stocks here are greatly reduced, and, owing to a scarcity of freights, very few arrivals take place—11s. 10s. to 11s. 15s. Scotch pigs have declined during the week to 48s. 3d.; leaving off to-day 48s. to 48s. 3d., for mixed numbers; market exceedingly dull.

LEAD.—Since merchants have ascertained that shipments can be made to any other country than America under bond, more enquiry exists for English pigs, chiefly for shipment to China. Prices are tolerably steady at 20s. for common, and 20s. 10s. to 21s. for superior brands. Spanish pig, 95s. to 19s. 10s.

SPELTER.—This metal has undergone a rapid decline since the announcement of the *Trent* affair, and there are now sellers in the market at 17s. 15



## THE HAFOD LEAD MINING COMPANY (LIMITED).

Capital £50,000, in 10,000 shares of £5 each, the first issue being limited to 6000 shares.

Deposit, £5. per share, to be paid on application, and 15s. on allotment.

No call to be made at intervals of less than three months.

Incorporated under the Joint-Stock Companies Limited Liability Acts, 1856 and 1857, so that shareholders will be liable only to the amount of their individual subscription.

ZACHARIAH C. PEARSON, Esq., Mayor of Hull (Messrs. Z. C. Pearson and Co.), 34, Great St. Helen's, E.C.

JOHN STUDY LEIGH, Esq., F.G.S. (Messrs. J. Study Leigh and Co.), 27, Leadenhall-street, E.C.

Major B. REMINGTON WILLIAMS, 2, Cheyne-walk, Chelsea, S.W.

JOSEPH TILSTON, Esq., 2, Lower Kensington-gore, W.

CHRISTOPHER J. COTTINGHAM, Esq., Barrister-at-Law, 18, Campden-grove, Kensington, W.

BANKERS—The London Joint-Stock Bank, Princes-street, Bank, E.C.

SOLICITORS—Messrs. Hughes, Kearsey, Masterman, and Hughes, 17, Bucklersbury, E.C.

OFFICES—No. 9a, GREAT ST. HELEN'S, BISHOPSGATE STREET, LONDON.

## ABSTRACT OF PROSPECTUS.

This company is formed for the purpose of raising the rich silver-lead ore on the Hafod estate, Cardiganshire, which is held on lease for 40 years, at 1-20th royalty. The grant is about 2050 acres, and lies between the Cwmystwyth and Llwsburne Mines, the former of which, on the £60 share, have paid in dividends £281 10s.; and the latter, on the £15 10s. share, £337 10s.

Detailed prospectuses may be had on application, by post or otherwise, and specimens of the ore and reports seen, at the offices of the company, No. 9a, Great St. Helen's, E.C.

N.B.—A large amount of the capital having been already subscribed, operations have been commenced at the mines.

## ST. JUST UNITED TIN AND COPPER MINING COMPANY (LIMITED), IN THE PARISH OF ST. JUST, NEAR PENZANCE, IN THE COUNTY OF CORNWALL.

Incorporated under the Joint Stock Companies Acts, 1856 and 1857.

Capital £15,000, in 6000 shares of £2 10s. each. Deposit on application £5., and 5s. on allotment.

JAMES WRIGHT, Esq., C.E., 42, New Bridge-street, Blackfriars, London.

Col. BUSH, 55, York-terrace, Regent's-park, London. Directors of the Great Wheal Thomas Cooper Smith, Esq., 5, Warnford-court, Throgmorton-street, London.

Capt. GOLDICUTT (late 60th Rifles), Barton Villas, Barnsley, London.

WENTWORTH LASCELLES SCOTT, Esq., M.S.A., Westbourne-park, Bayswater, London.

WILLIAM GREEN, Esq., Beverley-road, Hull, Yorkshire.

GEORGE EUSTICE, Esq., C.E., Hayle, Cornwall.

BANKERS—Roberts, Lubbock, and Co., 11, Mansion House-street, London.

Batten, Carne, and Carne, Penzance, Cornwall.

BROKER—Alexander Young, Esq., 3, Bartholomew-new-lane, or Stock Exchange, City, London.

SOLICITORS—Messrs. Hancock, Sharp, and Hales, 20, Tokenhouse-yard, City, London.

AUDITORS—Messrs. Cooper Brothers and Co., 13, George-street, Mansion House, London.

MANAGING DIRECTOR—Mr. Thomas Cooper Smith.

OFFICES—5, WARNFORD COURT, THROGMORTON STREET, LONDON.

This company is established for purchasing and working the extensive and valuable tin and copper mines, called the St. Just United, in the parish of St. Just, near Penzance, Cornwall, and situated in a district which is one of the most productive in the county, and has become distinguished by the rich returns and profitable results of mining operations carried on within it. The undermentioned mines, which are producing immense quantities of ore, and continue paying large dividends to the shareholders, are immediately adjoining and contiguous to the one under notice:

Names of Mines now working, paying dividends.	No. of Shares	Amount paid per share.	Dividends paid per share.	Original outlay.	Total Am't. of dividends paid.	Present market value.
Levant (tin & cop.)...	160	£2 10 0	£1091 0 0	£400 0 0	£174,560 0	£16,000 0
Botallack (tin & cop.)...	200	91 5 0	445 15 0	18,250 0 0	89,150 0	48,000 0
Wheal Owles (tin)...	80	70 0 0	280 13 0	5,600 0 0	27,452 0	24,000 0
Balewidden (tin)...	1624	11 15 0	12 5 0	19,052 0 0	19,894 0	19,488 0
Boscean (tin)...	240	20 10 0	35 0 0	4,920 0 0	7,920 0	12,000 0
Speare Moor (tin)...	280	31 17 9	9 15 0	8,928 0 0	2,730 0	12,600 0
Carnyorth (tin)...	2048	3 10 0	0 19 6	7,168 0 0	1,998 16	7,168 0
	4632	231 7 9	£1873 7 6	61,348 0 0	£318,712 16	£139,256 0

\* Decomposed granite, slate, and greenstone. \* Decomposed granite.

The above seven mines, on an outlay of £64,348 on the present working, have already paid back in dividends to the shareholders £318,712 16s.

As the before-mentioned mines stand prominent in the dividend-paying list, it may not be out of place to state also that Botallack Mine has given back to the shareholders in its former workings upwards of £250,000; Boscowell Downs Mine upwards of £40,000, and again resumed working by a new company; Wheal Cunnings upwards of £25,000; Boscean Mine upwards of £15,000; and Speare Consols for an outlay of £1280 upwards of £10,000; thus making a total sum five mines have paid back in dividends to shareholders of £340,000.

## PROGRESSIVE MINES.

Names of mines working.	Shares	Original outlay.	Market value.	Geological position.
Pendeen Consols (cop.)...	5000	£18,000 0 0	£28,730 0 0	granite, slate, & greenstone.
Boscowell Downs (tin)...	1248	7,800 0 0	9,984 0 0	granite.
Wheal Hearle (tin)...	1024	7,680 0 0	15,360 0 0	granite.
Bosweden (tin)...	123	3,938 0 0	3,938 0 0	granite and greenstone.
Bosorn (tin)...	160	1,000 0 0	1,600 0 0	granite.
	£38,416 0 0	£59,660 0 0		

The sets are very extensive on the course of the lodes, and have been granted at the very moderate royalty of 1-24th due for the term of 21 years, and upon the usual mining conditions. Fourteen rich tin and copper lodes and three cross-courses pass through this ground; some of these lodes have been wrought on, and, so far as they have been opened, have proved very productive, and will, no doubt, at a deeper level prove richer and lasting in their downward courses. This, in fact, has actually been the result in every mine in the district.

The geological position of this extensive and valuable mining property cannot be surpassed in the county. It is in beautiful strata, quite congenial for producing tin in the granite, and copper in the kilas (clay-slate) immediately adjoining the granite, precisely of the same character as Botallack, Levant, Pendeen Consols, and other mines in the district.

These mines lie immediately adjacent to the rich Botallack, Levant, and other mines, all making large dividends, and producing tin in the granite inland, and copper ore in the kilas under the sea. All these mines exist under such geological parallels, that it is almost impossible to overlook the fact that they cannot fail under good management to become highly profitable; so much so, that in a long catalogue of all the surrounding mines, not one but has proved a most excellent investment for capital.

With reference to these especial mines, the lodes in them which have been worked for tin for centuries have proved so profitable that the waste heaps seem inexhaustible, and after being worked over the third or fourth time are now affording great profits.

There are very large quantities of tin now lying underground, which were broken when that metal was worth about £40 per ton, but it is now worth £76 per ton, and may consequently now be prepared for market at considerable profits.

There is an immense field of tin ground, containing 14 lodes, in the granite. These have been partially worked to an inconsiderable depth, about 60 fms., under adit; affording evidence that there remains an unlimited supply below, which may be worked to extraordinary profits under the favourable circumstances of the prevailing high prices of tin, low prices of mining materials, and the improved steam-power of the age.

Some very beautiful specimens of blistered copper ore may be seen in the offices of the company, broken in the last day or two of working in the 40, by the last workers; but the levels, although close to the copper formation, have not been carried into it, and some idea of its extent and value may be formed from the evidence of a similar range of copper ore ground worked in Botallack Mine, which has given as much as £24,000 per annum profit.

There can be no doubt that this property is actually teeming with certain and abundant mineral wealth, as it is the decided opinion of persons competent to speak on this mine, that when it shall have been set to work the profits that will accrue therefrom will place it in a position second to none in the district for the outlay.

The directors, after an unusually rigid enquiry and careful inspection of these mines, have the greatest confidence in bringing this property before the public, and they feel satisfied, by established facts, that a more promising and advantageous investment, and one more free from any speculative feature, has never before been offered to the public.

A reference to the section and sketch of the sett will better illustrate the position of the lodes of these mines.

The opinions of several mining engineers that have been consulted on the subject are, that a steam engine of 36 in. cylinder rotative expansive machine, for pumping and stamping may be erected, and the mine drained, for about £5000, when it is estimated that a small additional sum will carry the 40 and 62 westward into the copper ore ground, so as to give dividends to the shareholders almost at once, or at any rate within a very short period afterwards.

The capital of the company will consist of £15,000 in 6000 shares of £2 10s. each, deposit 5s. per share on application, 5s. per share on allotment, and the future calls will not exceed 5s. per share at any one time.

The conditions of purchase for this valuable property are £2000 in cash, and £3000 in paid-up shares, the consideration for which embraces a lease of 21 years on highly favourable terms, the benefit of the work already done, with the plant, houses, materials, and slaves upon the mine; this will leave £10,000 for working capital, which is considered more than ample to carry out all the work necessary to place the mine in a dividend position.

The company having been completely registered with Limited Liability, no shareholder can, under any circumstances whatever, be made responsible for a greater amount than the shares to which he subscribes.

There are no special Articles of Association. Table B under the Joint-Stock Companies Act of Parliament having been adopted in its entirety.

To insure subscribers for any loss, which often ensues when a sufficient number of shares are not applied for, the directors bind themselves to return the whole of the deposit money, unless at least one-half of the shares are subscribed for.

A considerable portion of the capital has been already subscribed, and the directors will proceed to allot the shares as soon as they deem the requisite number applied for.

It is unnecessary to enter into further particulars in the prospectus, as the annexed reports of mining engineers and practical agents of the highest standing in the district, who have inspected these mines, will sufficiently corroborate the statements herewith submitted.

Some fine specimens of the ores from the various lodes may be seen at the offices.

Prospectuses, plans, forms, applications for shares, and any other information, may be obtained of the secretary at the offices of the company, or from ALEXANDER YOUNG, Esq., Stock Exchange, London.

ST. JUST UNITED TIN AND COPPER MINING COMPANY (LIMITED).—Mr. THOS. COOPER SMITH having ACCEPTED the MANAGEMENT of this COMPANY, all future applications must be made to him at the new offices, 5, Warnford-court, Throgmorton-street, London.

## THE ASHCROFT ANGLESEY COPPER MINING COMPANY (LIMITED).

Capital, £12,500, in 12,500 shares of £1 each.

Shareholders only liable for the amount of their subscriptions.

10s. per share to be paid on application for shares, with two calls of 5s. per share (if required), at intervals of not less than three months.

The company is completely registered according to the Limited Liability Acts of Parliament, passed in the years 1856 and 1857.

DIRECTORS.

THOMAS P. ELLIOTT, Esq. (Agent to the Hon. Mr. Stanley, M.P.), Penrhos Bradwin, Holyhead.

Capt. KNOX Proprietor of Irish Times, Fitzwilliam-square, Dublin.

HENRY PRICE, Esq., J.P., Blackrock, county Dublin.

PETER ROE, Esq., Claremont House, Rathgar, county Dublin.

JAMES DIGGES LA TOUCHE, Esq., J.P. (Director Midland Great Western Railway Company), Dundrum, county Dublin.

BANKERS.

National Provincial Bank of England, at Manchester, Chester, Holyhead, Bangor, and Carnarvon.

National Bank of Ireland, Dublin, Cork, and London.

SOLICITOR—James Malley, Esq., 48, Upper Sackville-street, Dublin.

BRANCH OFFICES ..... 48, UPPER SACKVILLE STREET, DUBLIN.

REGISTERED OFFICES ..... 2, BOSTON STREET, HOLYHEAD.

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REGISTERED OFFICES ..... 2, BOSTON STREET, HOLYHEAD.

BANKERS.

Messrs. Boyie, Lowe, Pim, and Co., 35, College-green, Dublin.

J. Cunningham and Co., Belfast.

Mr. Connell, South Mall, Cork.

Messrs. Lawrence, Son, and Pearce, Auction Mart, London.

Mr. George Hancock, 15, Tithebarn, Liverpool.

Mr. James Gorton, Newmarket-buildings, Manchester.

BANKERS.

National Provincial Bank of England, at Manchester, Chester, Holyhead, Bangor, and Carnarvon.

National Bank of Ireland, Dublin, Cork, and London.

so that great profits might be quickly realised, it is a hundred to one but the patentees will be losers by their genius, from the hundred ways sordid minds will pursue to profit by superior intellects parading to the world their innermost thoughts, actions, &c.—G. F. GOBLE: *Penrhyn*.

WEST MARGARET.—Some two years since a mine was advertised in the Journal, called West Margaret, near St. Ives: should this meet the eye of any of the promoters or purser, I shall be glad if they would convey through the Journal the prospects, and what tin has been sold, if no report appears.—F. N. T.

FURZ HILL WOOD.—Some time since the question was asked when Furz Hill engine would be put to work, but I have never seen any reply from either purser or committee. When the contract was made, it was stated that the engine was nearly ready. If such were the case, why is the engine not reported as working, and tin in the market? Surely the committee who made the contract should see it carried out, or take the great loss and responsibility on themselves; they ought to consider time is money, and I hope in next week's Journal to see there is a batch of tin in the market. If not, they may depend the question will be asked again.—PICK AND GAD.

WEST SILVER BANK.—In answer to enquiries with respect to the change of directors of the West Silver Bank Mine, we find it was done with the unanimous consent of all parties connected with the mine.

PEAT AS A SMELTING FUEL.—For many months past I have anxiously looked to the Journal for some report upon the progress making by Mr. W. H. Buckland, whose process for the production of a dense peat suited for the manufacture of iron at one time created much attention amongst the correspondents of the *Mining Journal*. Can any of your correspondents make known through the Journal the reason that Buckland's peat has never yet come into the market? I carefully tested the peat, and found its quality to be excellent, but, of course, I had no means of ascertaining the cost of production, or the price at which it could be sold. I learnt a short time since, that Mr. J. D. Brunton was about to form a company for developing Mr. Buckland's invention, and I am convinced that if adequate capital were subscribed, and the invention energetically worked out, good would result both to the shareholders and the public. The value of peat as a smelting fuel has been demonstrated; it is free in most instances from sulphur, and other materials deleterious to the quality. If Mr. Buckland's, or some other process for producing pure and dense peat cheaply could be carried out, we should be sure of an ample supply of iron equal to the charcoal irons of Sweden or India, and our industry generally would derive benefit.—J. C. B.

J. M. L.—We had such claims on our space as to render it impossible to publish the report referred to.

CREASE'S EXCAVATING MACHINERY.—Several letters having lately appeared in the Journal respecting Dale Mine, I beg you will find space for the following remarks:—I quite concur with Mr. Sykes, in last week's Journal, because it must be evident to anyone who visits the mine that no dividend can be paid until the new shaft is down to the Pipe. Time to us is, therefore, money, and a machine to work at the rate affirmed by Mr. Crease the very desideratum. I hope the matter will be discussed at the coming meeting, and if the machine has been tried anywhere, and found to answer its purpose, that an attempt will be made to purchase one, either by issuing new shares to the amount required, or otherwise, as may be deemed expedient. Should the machine have had as yet no fair trial, then perhaps an arrangement might be made with Mr. Crease to put down the shaft at a given rate, and pay for it on the fulfilment of the contract. In case of the machine proving efficient, a rapid development of the other parts of the mine could be made at very little expense.—ANOTHER SHAREHOLDER.

CODURROW MINE.—In the report last week, from the purser in the above mine, an error in one letter only may lead to the supposition that the late manager is alluded to. The error is this—"Treachery on the part of the employers," instead of "employees." Its correction is desirable.—A. B.

#### THE ANNUAL REVIEW OF MINING.

BY J. Y. WATSON, ESQ., F.G.S.

This valuable Epitome of Mining Progress is in course of preparation for 1861, being the Eighteenth Year. Purasers, agents, and others concerned, are requested to forward all their information, with as little delay as possible, either to our office, or to Mr. WATSON (Watson and Cuell, St. Michael's-alley), that complaints may not be made of defects or omissions.

## THE MINING JOURNAL

### Railway and Commercial Gazette.

LONDON, DECEMBER 14, 1861.

The many and increasing obstacles in the way of exporting British coals to Belgium is now receiving the serious attention of several influential members of the coal trade in this country; and from the communication addressed to Earl RUSSELL, as Secretary of State for Foreign Affairs, by Messrs. HARRISON, CARR, and CO., of Newcastle-on-Tyne, it appears that great, and to some extent successful, efforts to secure their removal have been made, both here and in Belgium, since we last referred to the subject. At the time of the separation of Belgium from the Netherlands, Holland was authorised by "the twenty-four Articles" to levy, as a compensation for the concessions she made, a tax of 1½ florin per register ton on all vessels entering the Scheldt, bound for Antwerp and Ghent. As this toll was authorised to Holland as against Belgium, the latter power has, since the tax was first imposed, in 1839, reimbursed the Scheldt tolls, probably upon the very just consideration that the Belgians alone ought to bear the burden of the impost. The Belgian Government, however, has now, it seems, resolved to throw the burden upon those importing into Belgium by way of the Scheldt, and thus relieve themselves from the payment of half a million francs a year.

This most unfair step on the part of the Belgian Government will, no doubt, be severely felt by the British coal trade; yet we cannot think it just that England should be called upon to offer, unassisted by Belgium, a compensation to Holland for the extinction of a tax, the removal of which is of ten times greater importance to Belgium than to England. From the letter already referred to, it appears that the feeling of the Belgian Government has been ascertained; and it is suggested that if England were to undertake to secure the removal of the Scheldt dues the Belgian Government might be induced to abolish tonnage dues, and reduce pilotage and duty on coals, at least so far as Great Britain is concerned. Now, that the removal of the Dutch Scheldt toll would be advantageous to England cannot be doubted, but we contend that the suggestion in Messrs. HARRISON and CARR's letter is unreasonable, inasmuch as it is equal to asking England to undertake to bear the burden which Belgium has thought proper to throw off; and that, too, upon the condition only that Belgium shall adopt measures which will secure to the industrial community of Belgium the inestimable benefit of an abundance of good coal at a low price.

France has so well understood the advantage of cheap iron and coal, that in concluding a commercial treaty with England she took the utmost precautions to ensure a supply of iron and coal in every case, unless actually at war with us, yet it has been proposed to give Belgium similar benefits, and almost pay her for accepting them. The only way in which England should interfere in any arrangement for the removal of the Dutch Scheldt toll by a pecuniary loss upon her (England's) part, is to offer that she will pay to Holland—say, one-fourth, certainly not more, of the amount to be agreed upon, for the extinction of the toll, provided that Belgium will undertake thereto to admit English coal and iron into Belgium free of all imposts, except, perhaps, a small pilotage charge, and that all other English products and manufactures shall be admitted at an *ad valorem* duty of not more than 10 per cent. upon their value at the place of shipment. Even with this arrangement Belgium would derive far greater benefit than England by the change, and would have the advantage of material assistance from us in removing a burden which no doubt presses heavily upon her.

The discussion upon the subject of the relative superiority of NIXON'S Navigation coal and THOMAS's Merthyr was referred to, by a correspondent, in last week's Journal, and we this day publish the letter of "Carbon," by which our readers will be put in possession of both sides of the question. It is very justly urged that discussions like the present should not be too hastily passed over as simple personal disputes, because it often happens that, in their efforts to prove their own arguments correct, the disputants make known to the public facts which would otherwise for ever remain trade secrets. Thus it is that, in the present case, purchasers have been enabled to make several important notes to guide them in their future transactions. Mr. NIXON has admitted that his coal is higher in price than any other coal in the district, and that it is the practice of his rivals to mix the coal from several seams, though he prefers the Upper Four-feet, which, he contends, is superior to all other for steam purposes. But in reply to this "Carbon" shows that no advantage whatever results from using the Upper Four-feet alone. From 86 trials of Sguborwen Merthyr (comprising a mixture of a greater number of the coals enumerated by Mr. NIXON than any other in the Aberdare Valley), compared with five trials of the Cwm-Aman Merthyr Upper Four-feet, it appears that the evaporative power of the Upper Four-feet and of the Mixed coal is *equal*, but that the Upper Four-feet has the disadvantage that the percentage of ash contained is upwards of 16 per cent. greater than in the very mixed Sguborwen. Again, in opposition to the Upper Four-feet, it is stated by "Carbon" to be liable to break down to small, to which Mr. NIXON's only reply appears to be that "his statement that theoretic superiority of evaporative power and freedom from breaking down to small constitute the essentials of a steam fuel, is incorrect;" but it should also be mentioned that Mr. NIXON

has submitted to us a large number of testimonials from various firms, and from the engineers of the principal steam navigation companies, including the Cunard, West India Royal Mail, Peninsular and Oriental, Hamburg and American, Liverpool and Montreal, and the Pacific Companies.

But although from this it would appear that the argument is against Mr. NIXON, it must not be concluded that any Aberdare coal that can be obtained at a lower price than NIXON's Navigation should have the preference, though the bold statement that the coal from the Upper Four-feet seam is 20 per cent. better than ordinary Welsh coal is so palpably erroneous that no reliance should be placed upon it. Indeed, unless the precise seams from which the coal is raised be known it would, perhaps, be better, now that it has been asserted that the coalowners of the Aberdare Valley are in the habit of mixing coals of inferior quality with those which give the entire valley an enviable notoriety, for purchasers to choose even NIXON's Navigation coal at the high price it is stated to enjoy in the market than unknown coals. In comparing, however, such coals as NIXON's Navigation, WOOD's Merthyr (now called THOMAS's Merthyr), Cwm Aman, Sguborwen, CARR's Merthyr, and others equally well known for steam purposes, we believe that the quality is so nearly equal that price alone should be considered in making the selection. The sole conclusions we can arrive at from the arguments adduced, and from the testimonials alluded to, are that NIXON's Navigation coal is a first-rate article, and that some mixed coal shipped at Cardiff is of inferior quality to NIXON's Navigation; but that it does not follow because a coal does not come exclusively from the Upper Four-feet seam, that it is, consequently, inferior to NIXON's Navigation, as some mixed coal is equal, if not superior, to NIXON's Navigation. Whilst referring to the subject of Welsh coal, we may mention that a company—the Amman (Aberdare) Colliery Company—has just been formed for the purpose of working and bringing into the market one of the coals above alluded to. CARR's Merthyr is already well known in the market, and is upon both the English Admiralty and the French Marine lists; and as it is proposed by the Amman Company to work the property with a capital of 100,000*l.*, it is confidently expected that enormous profits will be realised by the shareholders.

#### GOVERNMENT INSPECTION OF MINES IN SOUTH WALES—BORE-HOLES.

In the Journal of Nov. 16 we offered some remarks on the extraordinary proceedings which occurred at the Swansea Petty Sessions on Sept. 28, in the case of Mr. Evans, the Inspector of the district, against Mr. F. H. Perkins, the owner of the Lynch Colliery. We then stated in effect that a conviction had been obtained by a perversion of the law, and that the magistrates had been influenced in their decision by the evidence of Messrs. Evans and Brough, and by a construction of the clause in the Act of Parliament at variance alike with legal practice and common sense.

About a month has elapsed since the remarks appeared in our columns, and Mr. Evans has so far assented to the general correctness of the statement of facts then given as not, personally at least, to question the fairness and truth of the representations we then made. In the Journal of Nov. 23, however, Mr. Brough, on behalf of himself and his colleague, and in reference to our remarks upon the subject, says—"No statement of the kind was ever made by the Inspectors, nor did such an idea ever find place in the mind of either. Repeated reference was made by both to the 15th general rule, requiring bore-holes in approaching working places likely to contain dangerous accumulations of water, but there is not one word of truth in the allegation that we otherwise quoted the Act of Parliament." This is terse, emphatic, and unequivocal, and we can honestly assure Mr. Brough that we have no disposition whatever to treat him or any other of Her Majesty's Inspectors unfairly in any way, and that if we have unintentionally done so, we are quite ready, and at all times, to make the amende honorable. Mr. Brough's assertions, however, are met by counter assertions, and the latter are corroborated by the reports of the proceedings which appeared in the local newspapers, and are still further to some extent confirmed by the letter signed "Coal," which appeared in our columns, and by the prevalent reports in the district.

It is "no statement of the kind was ever made by the Inspectors," how comes it that the reporters of the press, the persons present, and the public, should say and believe that such a statement was made by the Inspectors? It is not for us to say which is right and which is wrong; but after having been charged by Mr. Brough with having made "the most unfair attack on Mr. Evans and himself," with having published a false statement of what occurred at the Swansea Petty Sessions, and advanced allegations in which he says "there is not one word of truth," we have no choice left, but are compelled to endeavour to vindicate the course we have pursued. Referring, then, to a report of the proceedings which appeared in the *Llanelli Telegraph* of Oct. 3, we find the following words—"Mr. Brough, also one of the Government Inspectors of Mines, said he had not made a personal inspection of the pit in question, but assuming what the overman had said to be correct, it was in his opinion necessary that the boring should be continued. In cross-examination he said he could point to three pits which were now in course of working, and where the borings are continued, even though there was no reason whatever to believe that there was any accumulation of water in their vicinity." We said in the article denounced by this gentleman "Mr. Brough boldly stated that he knew collieries in which the practice of boring in advance of all the headings was invariably pursued." We contend that Mr. Brough's reported evidence was fairly and impartially represented by us; if the report was untrue, and it appeared in another local paper as well as in that we have quoted, how is it that Mr. Brough allowed it to pass unheeded, and to do so much harm for so long a time? Mr. Brough now says, "no such statement was made," but Mr. Richard W. Perkins, who was present, as positively asserts that Mr. Brough did say so; whilst Mr. Bateman, C.E., who was also present, says "Mr. Brough's evidence was most guarded; but coming as it did immediately after Mr. Evans's statements, it left the impression that it was intended to prove that (and if it did not prove that it proved nothing) the 15th rule actually required bore-holes to be kept in advance in all cases" (see the *Mining Journal* of Nov. 30); and yet Mr. Brough says that such an idea never found place in his mind! In addition to all this, we have the letter of "Coal" (which we may take the opportunity of stating did not emanate from Mr. Evans), and which throughout its whole tenor is a direct refutation of Mr. Brough's letter.

From what Mr. Bateman says it appears that Mr. Brough was not present during the latter part of the proceedings, and is not, therefore, personally responsible for what then took place. But seeing that he was not cognisant of what occurred in his absence, we think he ought to have made himself acquainted with the facts before he ventured to denounce the statements of others as false. At all events, the evidence we have adduced will prove to our readers that we had substantial grounds for our remarks, and that the attempt which has been made to refute our statements has signally failed; whilst we have the satisfaction of knowing our efforts have tended most materially to allay, if not altogether to extinguish, the anxiety and alarm occasioned by the decision upon which we have commented.

VENTILATION OF MINES.—In the inaugural address of the present session of the Institution of Engineers in Scotland, Mr. W. Johnston, the President, remarked that the mechanical appliances employed underground are daily increasing, and the engineer who could contrive and arrange a locomotive to suit the peculiarities of underground haulage would receive, and well deserve, the lasting gratitude of the coalowners of this country. Though he was not aware that any coal-hewing machinery hitherto introduced had been found practically useful, the ingenious contrivances successfully applied in reducing manual labour would induce the general observer to anticipate that even in coal-hewing the time may not be far distant when some mechanical arrangement will be introduced to aid and economise the labour. Situated in the centre of a rich and extensive mineral field, enjoying the advantages of cheap coal and iron, we cannot forget that those who produce so much of this country's wealth are subject to many painful casualties, and it is clearly the province of the Institution of Engineers in Scotland to foster and encourage every appliance having for its object the safety and improvement of this useful and invaluable class of men. Amongst the papers read at the meeting was a highly interesting one "On the Ventilation of Mines," by Mr. George Simpson, in continuation of his paper read in January last. Mr. Simpson repeats the suggestion to provide a check upon the fireman, so that it would be impossible for him to neglect with impunity his duty of examining the whole of the working faces, &c., before the men descend, and thus render them liable to accident immediately upon entering their places. He gives no preference to the collection of tickets from, or the lighting of lamps in, each place, believing either method would afford ample protection. From a glance at the present system of ventilation now in general practice in coal and ironstone mines in Scotland, it is quite obvious that, with the exception of the means used to produce artificial currents, there is little or no evident mark of progress during the last 200 years. One of the reasons that so much coal is being daily lost to the country by the continuation of the old method of stoop and room working, in place of the long wall system, spring from the prejudice of the miners themselves. As an improvement upon the stoop and room working, as generally practised, Mr. Simpson proposes an arrangement by which the shaft (only one is used) is rendered more effective. The shaft comes down between two semi-circular galleries, and is divided into four rectangular compartments, the two inner ones serving for winding, and the outer ones for upcast and downcast pits, respectively. The furnace in the upcast is placed considerably higher than the bottom of the downcast, and the semi-circular gallery admits of the trucks being brought to the shaft by one route and taken away by another, thus avoiding all confusion. An animated discussion followed the reading of the paper, Mr. Alexander, the Government Inspector for the district, Mr. W. M. Neilson, Mr. Angus, Mr. Ronald Johnstone, Mr. Simpson, and the President, taking part. Thanks were voted to Mr. Simpson, and he was requested to bring the matter again before the Institution, by continuing his papers.

NATIONAL ASSOCIATION FOR THE RELIEF OF BRITISH MINERS.

This is the title given to a new association, established under the presidency of Sir Fitzroy Kelly, for ameliorating the condition of the miners of the United Kingdom. The committee of the association embraces the names of several peers, members of Parliament, and other influential individuals. The objects of the association are to reward the discovery and recommend the adoption of improved plans of ventilating mines, thereby lessening the risk to which men engaged in underground operations are now, unfortunately, too frequently subjected. Annual prizes are also to be given to managers or underground viewers, as they are technically termed, who have exhibited the greatest care in providing for the health and safety of the men under their charge. It is further proposed, in all cases of accident, to afford immediate pecuniary relief to the persons and families who suffer from colliery or mining accidents. This is proposed to be effected from the general funds of the association, which appeals to the benevolent feelings of all classes of the British public for sympathy and practical aid. But while the operations of the association would be thus far eleemosynary, it does not neglect to appeal to the higher feelings of human action. Whilst ready to extend prompt relief to the suffering and distressed who have been overtaken by those dreadful calamities which so repeatedly occur in collieries and mines, it seeks to inculcate the necessity of prudence, forethought, and self-reliance on the whole class of working colliers. The condition of the miner in illness, or when suffering from accident, has but too often been synonymous with misery and want; yet it is estimated that a subscription of 1*d.* per week, paid by the mining population of England alone, would realise the magnificent sum of 60,000*l.* per annum, a sum fully adequate to provide for every case of illness and accident arising in mining operations; to provide for the aged and infirm, and to supply the means of support and proper education to the orphans whom colliery explosions and other fatalities have left fatherless, and often homeless. The agencies by which results so important may be achieved are now placed at the disposal of the mining operatives of this country. The third object of the association is the establishment of schools where none now exist, and affording aid to those in existence. It is impossible to over estimate the importance of affording additional means of education in the mining districts of this kingdom. The want of educational means must be supplied if we are ever to reduce to a minimum those fearful sacrifices of human life which now take place with such fatal rapidity, or hope to elevate socially and morally the large population that find employment in mining operations in this country. An association with objects such as these which we have indicated has strong and paramount claims on the sympathy and support alike of the mine owner, the lessee, the parties who derive profit indirectly from the produce of our collieries and mines, and the general public, and is entitled to the benevolent consideration of all.

WELSH STEAM-COAL.—It is an established fact that the Admiralty, French Marine, and the Peninsular and Oriental, Royal Mail, and other leading steam-ship companies, prefer the coal raised in the valley of Aberdare, Glamorganshire, as the best for producing and keeping steam of any fuel whatever. As a very natural result, the demand for Powell's, Nixon's, Carr's, or other personally-denominated produce from that celebrated district, has so much exceeded the supply as to render desirable the working of as many more collieries as possible on the particular seam once better known as Merthyr coal; and we are happy to see that a new undertaking, the Amman (Aberdare) Colliery Company (limited) has been started in aid of an object that has, at this particular juncture, become more than ordinarily necessary. If ships have been so long detained for loading in time of peace, how much more competitive for cargoes will consumers become when the unusual requirements of war have been added to the demand? The company mentioned has works in hand from which about 300 tons of this excellent steam-fuel is already shipped daily; and which will be increased daily with enlarged capital. In the members of the board of directors we observe excellent co-operators for carrying out the objects of the company; and a perusal of the prospectus (which will be found in another column) will satisfy our readers that this establishment is peculiarly worthy of participation by investors and of support, upon every imaginable ground, by the public.

THE COTTON SUPPLY.—The advantage which must accrue from an ample supply of cotton being obtainable from several countries instead of from a single district, as has hitherto been the case, can scarcely be overestimated, and every effort to make our colonies cotton producing should receive the utmost encouragement. An influential company—the Natal Cotton Company—has just been formed, upon the limited liability principle, with a capital of 50,000*l.* (with power to increase to 150,000*l.*), should it be thought advisable to do so), in shares of 5*l.* each, for acquiring lands and cultivating cotton in the colony of Natal. The capabilities of the colony to yield cotton may be judged of from the circumstance that it is found that the yield of cotton per acre per annum in America is about 400 lbs. weight, and it is necessary to plant afresh every year; whilst in Natal the plant will yield from 400 lbs. to 700 lbs. per acre, and will bear crops for five, ten, or fifteen years in succession, thus saving the cost of annual planting. A planter of Natal lately cleared a profit of 50 per cent. on cotton, and with the additional expense of annual planting, which is now found to be quite unnecessary. The Natal Company has entered into a conditional contract for the purchase of estates, about 36,000 acres in extent, for 29,945*l.*, which are in every respect admirably adapted for the growth of cotton. Abundant native labour can be obtained at a trifling cost, railways have already been introduced, and there is every prospect, judging from the rapid progress of the past few years, of the colony speedily acquiring a position which will make it unsurpassed for the growth of all kinds of cotton and tropical products

COPPER MINING IN ANGLESEY.—For some time past the Parys Mountain has occupied an enviable position amongst the copper-producing mines of Great Britain, and the island of Anglesey has been rendered as interesting to the industrial population of the present day as it was in former times celebrated as the chief seat of learning in these islands—the home of the Druids. The large returns of mineral from both Parys and Mona Mines have inspired the proprietor of a valuable mineral tract in the same locality with confidence, and induced him to grant a lease for a long term, and at a low royalty, to facilitate the complete development of the resources of the property. To work this sett, the Ashcroft Anglesey Copper Mining Company has been formed, the nominal capital being fixed at 12,500*l.* in 1*l.* shares, and the liability of the shareholders being limited by registration under the Joint-Stock Companies Acts of 1856 and following years. Samples of the ore have been assayed by Messrs. Johnson and Johnson, of Basinghall-street, and found to contain from 7 to 10 per cent. of copper at the present depth—an important consideration, when it is remembered that the large returns from the Parys Mines have been obtained from ore of far lower produce. A letter has been received from Sir Richard Griffith, Bart., of the Board of Public Works, Dublin, expressing a favourable opinion of the property, and he has permitted this letter to be appended to the prospectus. The sett has also been inspected and reported upon by Messrs. Jehu Hitchins, J. H. Clement, and Alfred Jenkin, all of whom concur in anticipating large profits for the shareholders. The directors fully believe that the adventure can be made lastingly profitable, with an outlay of not more than 5000*l.*; but to provide for all possible contingencies a more than ample capital has been fixed upon. The situation of the mine is described as all that can be desired, and is only two miles from the Holyhead Railway station, and 10 yards from the sea at

high water. The board of direction is composed of influential gentlemen, including the agent of the lord (the Hon. W. O. Stanley, M.P.), and there is everything to warrant the assumption that the management will be in strict conformity with prudence and integrity. Since the prospectus was issued the shaft has been sunk another 2 fms., producing ore nearly 2 per cent richer than that last assayed. Dec. 31 will be the last day for receiving applications for shares.

**THE ST. JUST UNITED MINES.**—We understand it to be the intention of the directors of this company to close the list for applications in a few days; that the works at the mine will be commenced without delay, and pushed on with the greatest vigour, and that the shareholders may fairly expect to receive a dividend within 12 months from the day the engine goes to work. Captain Carthew, who has reported on these mines, is sanguine as to this result, and of its proving one of the richest mines in the district; he has offered to give up all his other appointments for the management of this mine, and he asserts that he will engage to raise 10 tons of tin per month from one point; and as soon as the water is in fork, that he will be in a position to employ 300 men breaking tinstuff in the various levels. Such a statement, coming from a man who has lived nearly all his life in the neighbourhood of St. Just, and who is considered one of the best tin miners in the district, cannot fail to give confidence to the shareholders, and a strong opinion as to the remunerative character of the undertaking. It is satisfactory to find that the management has been placed in such thoroughly competent hands as those of Mr. Thomas Cooper Smith, whose long practical experience may be taken as a guarantee for the exercise of that careful supervision which should ensure the success of the enterprise.

**THE GOLD MINES OF BRAZIL.**—The richness of the Minas Geraes district has been proved by the enormous profit which has been realised by the proprietors of the fully developed mines, and that these riches are almost unlimited is shown by the similarity of the indications in those mines which are still in a progressive state. Upon the formation of the company (the Santa Barbara Gold Mining Company) for working the well-known and justly-celebrated Pari Gold Mine the excellent prospects before the adventurers were referred to, and our remarks are fully confirmed by the information since received from Brazil. The purchase of the Pari Mine and estate had been completed on Nov. 6, upon which day Mr. Tregellas writes that he had had the necessary documents drawn in full legal form, and that they had been signed by Senor de Miranda and his wife, in the presence of proper witnesses. He had carefully examined the property, which comprises an area of four square miles, contains plenty of useful timber, and offers every facility for carrying on extensive mining operations. From the applications he has already received from Brazilian labourers, carters, &c., for employment, there will evidently be no difficulty whatever in getting sufficient hands for any work they may require. Mr. Thomas Bawden, the owner of the Morro de Santa Ana Mine, who is well known as a practical miner, and has had 30 years' experience in Brazil, also examined the property, and is not only charmed with its appearance, but expresses the opinion that Senor de Miranda must have expended a sum nearly equal to the purchase-money in bringing it into its present position. Mr. Richard Francis, a gentleman just returned from Brazil, and who is well acquainted with the mines of the Minas Geraes district, states that the Pari Mine only requires some capital, with efficient and economical management, to make it equal to any in Brazil. All necessary iron and castings may be obtained on the spot, and at short notice. Such an opinion from a gentleman who has spent 10 years in the mining district, who knew the St. John del Rey in its infancy, and before it became the property of the present company, who knew Gongo Soco (now a deserted village) in its palmy days, and who is well acquainted with the Maranbas, Cuiaba, Capas, Emily, Brumant, and Coceas properties, must be highly satisfactory to the shareholders. From these remarks it will be seen that ample capital and efficient management are the only requisites to ensure success, and both of these the directors of the Santa Barbara Company have been very careful to secure.

**THE ATLAS COAL COMPANY** has given notice that no application for shares will be received after Dec. 21, and that on the Monday following the directors will proceed to allow the shares. The direction has been strengthened by the addition of Mr. J. Schofield, Providence Mill, Lees, near Manchester, and we understand that the greater portion of the shares has been applied for. It will be recollect that the nominal capital was fixed at 10,000,000., in shares of 5s., and no doubt is entertained of between 40 and 50 per cent. per annum being realised as profit. The property has been obtained upon very favourable terms, and the royalty is only 1d. per ton upon coal raised from the portion of the property held from the Crown, and 1½d. per ton upon that from other parts. The statutory regulations (table B) of the Joint-Stock Companies Act have been strictly adhered to.

**CLARA SILVER-LEAD MINING COMPANY (LIMITED).**—A very unusual, but energetic, step was taken on Monday by a petition to the Court of Bankruptcy for a winding-up order, arising from the following circumstances:—The company was incorporated in 1857, in 2000 shares of 4s. each, to work this set, which is situate on the main road from Llanidloes to Aberystwyth, about 11 miles this side of the latter-named place, and close to Cefn Cwm Brwyno. It had a very chequered existence for upwards of four years, during which time it was subject to many annoyances from the sharp practice of a local executive of the law—unfortunately a very prevalent element in Cardiganshire—which at length led to proceedings still pending in ejectment and in Chancery. We need not add for the information of our readers that such a state of things not only necessarily retarded the mining operations, but exhausted the exchequer of the company; nor will they be surprised when we state that the commencement of the present year found them defendants to a suit in Chancery, with but a very small balance at their bankers, and only 2s. 6d. per share, of the 4s., remaining to be called up. However, these surface expositions and freaks could not control Nature's deposit below, and happily about March the mine began to show evidences of the possession of a first-rate lode; but, as the working operations were slow, for the reasons before given, it was not until the end of May that the full measure of its value became apparent; the company was then without funds to do even partial justice in its development. Hence the experience of others was sought as to the best mode of increasing its working capital. Looking at all the phases of things—that is, both legal and commercial, and the bitter enmity existing between the litigants, the wholsome advice given upon this appeal was—“Wind-up your company, rid yourselves altogether of its antecedents, and join a new one.” Following this out, it will be remembered that in July last a general meeting was held, to consider the “voluntary winding-up,” when resolutions were specially passed so to act, and liquidators were appointed to carry it out, these special resolutions being confirmed at a subsequent meeting in August. Upon this the liquidators, acting under the instructions of the general meeting, and by virtue of their appointment, proceeded, without delay, to wind-up its affairs. The plant and machinery were sold to a new company, previously formed and registered, who, in the meanwhile, had purchased the lease of, and powerful machinery upon, the adjoining property—Ponterwyd—and who were thus enabled to give the full valued price for the old Clara materials, besides admitting with advantages such of its shareholders as might elect to become connected with the new. Notwithstanding this fact, the consequent avoidance of a sale by auction at the usually ruinous prices, and the preparation for the speedy distribution of its assets, the litigation still went on, and one fine morning the old company's secretary, Mr. W. Thomson, was served, without notice, with seven writs, by the agent of a local solicitor, at the suit of creditors, amounting in the aggregate to the miserable sum of about 50s., these seven writs being endorsed with 28s. costs. The liquidators (Messrs. Balcombe and Rowlands) deeming it their duty to protect the general body of creditors, wisely allowed judgment by default, and, in order to prevent the assets being wasted by these scandalous proceedings, they promptly presented the petition to the Court of Bankruptcy, to which we have referred. The assets, more than sufficient to pay at once 5s. in 1s., will now be saved for the creditors, instead of being trifled with by the contest which otherwise must have followed this unwarrentable attempt to secure an advantage by certain over-reaching creditors, to the detriment of all the rest; and further the result will be that these ill-advised, or their clients, will very properly get muled in the amount of their costs.

The action by the **GREAT BARRIER LAND, HARBOUR, AND MINING COMPANY v. WILLIS, GANN, AND CO.**, which occupied the Court of Queen's Bench the whole of Tuesday, resulted in a verdict for the full amount claimed—987. 9s. 6d. The jury also awarded interest from February last; but, as a point of law might arise on this, the plaintiffs waived it. It appears that the company had resolved to send out sawing machinery to New Zealand, to be erected at their valuable Kauri forests there, and in January last Messrs. Willis, Gann, and Co. entered into an agreement to take out two large steam-engine boilers, an iron chimney in four pieces (if they could go inside the boilers), and 500 fire-bricks, and deliver them at the company's harbour—Port Fitzroy, for the sum of 500s. In the agreement the boilers were described as 25 ft. long, and 5 ft. 9 in. by 8 ft. 6 in. in diameter, and in weight 8 to 10 tons each. The only stipulation in the agreement (which was dated January 29, 1861) was “should the weight prove to exceed 10 tons, and the fact be intimated to Willis, Gann, and Co. in course of to-morrow, they are to have the option of cancelling this agreement.” The company accordingly telegraphed to the manufacturers in Cornwall, who replied that the weights of the boilers would not exceed 8½ tons each, and they turned out eventually only a little above 7 tons each; but the dimensions exceed those stated in the agreement by 6 in. in length and 1 in. in diameter. The defendants shipped the boilers, &c., without giving any notice to the plaintiffs, and did not put the chimneys inside, though it was proved that it could easily be done. They then sent in bills of lading, with several important conditions, contrary to the agreement, and a freight amount for 3887. 9s. 6d., refusing to give up the bills of lading until this sum was paid, though by the agreement, they were not entitled to be paid anything until 10 days after the ship sailed. The plaintiffs refused to pay more than 300s., and, on the defendants still declining to give up any of the extra claims, the plaintiffs offered to refer it to any respectable shipbroker in London, but this the defendants also declined. In order to get the bills of lading the plaintiffs paid the 3887. 9s. 6d. under protest, and then brought their action for the 987. 9s. 6d. The jury gave a verdict for this amount and interest, but as there were some technical doubts as to whether interest could be recovered the plaintiffs waived it. It was also stated that a number of the jury considered that the defendants ought not to have allowed this action to be brought, after the plaintiffs had offered to refer the question in dispute. The jury

said that as the defendants would have been entitled to the full 300s. had the dimensions been less, they could not ask more as they were a little in excess, and they considered it was a “lump” bargain.

#### REPORT FROM NORTHUMBERLAND AND DURHAM.

**DEC. 12.—THE COAL TRADE** continues very dull generally, this is especially the case in the steam coal district in Northumberland, where the works are only carried on six or seven days per fortnight. The Hartley Pit has been flooded with water lately, but has been again re-opened. The sinking at the Bedlington new pit progresses very slowly, owing to the quantity of water met with; this is issuing from a kind of quicksand. At the Newsham new pit a few coals are drawn daily, and it is expected to be ready for active operations early in the spring. The Bebside Colliery is one of the most extensive in the district, and 36 keels of screened coals are sent away daily, no less than 550 coal hewers being employed. Some new “windings” are projected in this district when the trade again revives, some movement will, no doubt, be made about them during the ensuing year. The collieries on the Wear are doing better than those in Northumberland, the gas and house coal collieries being pretty well employed. The operations underneath Lambton Castle are still in progress for the purpose of securing the foundation of this structure, and in the course of these some curious phenomena have taken place. A bore-hole was put down from the Maudlin seam to the Hutton seam; when it holed a great quantity of gas came off, the men had to leave the rods in the hole, and the gas soon filled the lamps at the surface. After standing three weeks, the men went down to get the rods out of the hole. After they got them out the gas came away again, and men are now watching to prevent any one going to or near the pit's mouth with a light, as the gas would ignite at once near the surface.

On Monday week the ceremony of inaugurating the monument to the late Marquis of Londonderry was performed in the Market-place, Durham, before a large crowd of spectators. It is an exquisite statue, and in its general appearance produces an imposing effect. The late Marquis was a man of especial consequence in the county of Durham, as he was the owner of extensive collieries, and took an active part in their management. For many years previous to the death of the Marquis the Marchioness took a great interest in those collieries also, and especially in the education of the children belonging to the many workmen employed. This she continues to do, as is well known, being a pattern in this respect to other coalowners. The event caused great interest in the neighbourhood, and the whole of the collieries of the Marchioness were laid idle on the occasion.

A man was killed in the Dean Moor End Coal Pit, Dissington, last week. A portion of the roof fell upon him when he was working, and he died four hours afterwards. His name was W. Stainton, and he was 43 years of age. There was a sad accident at the Felling Colliery, on Monday. Two men had been down the upcast shaft at the tubbing, and on again coming to bank one of them stepped off the cradle, when it is supposed the cradle jerked up, and the other man, of the name of Dixon, fell to the bottom and was killed.

A general meeting of the members of the Northern Institute of Mining Engineers will be held at Newcastle on Thursday, when the President will read a paper “On the Connection of the Upper and Lower Coal-beds of Northumberland,” and Mr. Reid's paper, “On the Relative Ages of Coal Formations, and Comparative Discussions on their Co-formation in Great Britain and elsewhere,” will be open for discussion.

#### REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

**DEC. 12.—THE IRON TRADE** keeps quiet, but without any decided change. So long as the present uncertainty with regard to the issue of the dispute with the Federal States lasts it must exercise a depressing influence, but the decision either for peace or war will probably lead to an improvement. Shipbuilding yields a very considerable portion of the orders for iron, and the tendency to construct plated naval vessels is necessarily augmenting that portion of the demand. As yet none of these monster plates have been produced in South Staffordshire, the immense expense of the necessary machinery deterring ironmasters at present from engaging in this department of production, which promises to become a very important one. For pig-iron there is as yet nothing doing. The time is approaching when makers of finished iron must replenish their stocks, meanwhile the producers of pigs are asking higher prices. Should war result from the present complications, a renewed impulse will probably be given to the demand for the production of shot and shell, &c., but whether this will exceed the diminution which the loss of our trade with the Federal States will occasion, and the adverse influence of exposure to privateers, is open to question.

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#### REPORT FROM YORKSHIRE, DERBYSHIRE, AND LANCASHIRE.

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The Ettingshall Ironworks, near Bilston, and the mines connected with the estate, have been purchased from the trustees of Mr. Wm. Banks, to whom they, and all the property, were assigned for the benefit of the creditors by Messrs. Hale and Fowler. It is understood that the purchasers intend taking down the mills and forges, and only making pig-iron; and that they will pump the water out of the flooded measures, and raise the coal. It is thought that they will at first only put one of the two blast-furnaces into operation.

The failure of Mr. Leonard Bower, railway bolt, screw, and rivet manufacturer, of Oxfoord-street, Birmingham, was announced yesterday. It is stated that the liabilities do not exceed 20,000s. Several of the manufacturers of iron in South Staffordshire are, as might have been imagined, creditors of Mr. Bower. It is stated on his behalf that the refusal of his bankers to give them accustomed assistance, and other untoward circumstances, have occasioned the stoppage. The rumours are that he had received railway debentures largely in payment for the articles he supplied, and that his bankers have recently declined to advance on these securities to the extent that he had previously done.

Mr. Joseph Beattie, who it is said, has been in the banking house of Messrs. Goold and Sharpe, of Fleet-street, London, has been appointed manager of the new joint-stock bank in Birmingham. It is anticipated that in a few days the time of opening the bank will be announced.

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**DEC. 12.—NOTWITHSTANDING THE EXTREME PROBABILITY OF A RUPTURE WITH THE FEDERAL STATES** it must exercise a depressing influence, but the decision either for peace or war will probably lead to an improvement. We admit the manufacturers of secondary brands of iron find a difficulty in meeting with a ready market, and they have to submit to lower terms to effect sales; but taking a general view of the trade, and considering the critical state of parties, it is in a satisfactory condition. The demand for rails and railway ironwork is exceedingly good. Messrs. Brown and Co., of the Atlas Iron and Steel Works, Sheffield, have received a large order from the Admiralty for armour plates, and this firm bids fair to do an immense trade in this department of iron. We should also mention, for the honour of Derbyshire, that the whole of the iron supplied for the manufacture of these plates is from the firm of Messrs. W. Fowler and Co. of the Sheepbridge Ironworks, near Chesterfield. We shall next week be in a position to supply an exact copy of the diagram of the experimental trials which took place recently at Portsmouth to test the extraordinary power of resistance of these plates. The demand for pig-iron continues steady, and the rates are tolerably firm.

The Coal Trade is very active, considering the depressed position of manufacturing trades. At some collieries the men have not been so fully employed as on the average. At Staveley a portion of the colliers have been working short time, on account of the superabundance of stock on hand. At Workington, the men have been put on short time, but these are rather exceptional cases. We understand that last week a large contract for the supply of several thousand tons of coal weekly was received at Staveley, which is expected to make the extensive works there exceedingly brisk.

A sad accident occurred at the Cottamway Pit, on Monday, the property of Messrs. Barber and Co. One of the workmen incautiously put his light near an escape of gas, which caused an explosion, and five men were severely burnt. We are glad, however, to state that none of the cases are likely to have a fatal termination.—An accident occurred at Heanor, on Monday night, to a man named George Severn, by the fall of a quantity of bind, which crushed his head dreadfully, at once depriving him of power of speech and hearing, as well as the sight of one eye.

The extension of the Midland Railway from Rowsley to Bakewell is nearly completed, as are also the works on the other part of the line. We may likewise add that the Midland Company intend to declare a dividend, at the rate of 7 per cent., at the forthcoming half-yearly meeting. This happy result is mainly owing to the increased development of the mineral traffic on their line. It is a remarkable dividend, considering the unusually depressed condition of the manufacturing trades of the country.

There is nothing particularly noteworthy to record regarding the position and prospects of lead mining in Derbyshire. We understand the dispute between the contractor for sinking and the North Derbyshire Company has been settled, and that the company have taken the work of sinking the shaft into their own hands. The Mill Town Mining Company, at Ashover, are through the toadstone, and are driving a level; and the Mill Dam Company are getting an increased quantity of ore. The Prince of Wales Mine, too, from its promise of yielding a good quantity of ore, from which both gold and silver are to be extracted, is held in high estimation by our local mining adventurers, and the

shares are becoming exceedingly valuable and difficult to purchase, none being on offer in the share market.

#### REPORT FROM MONMOUTH AND SOUTH WALES.

**DEC. 12.—THE UNCERTAINTIES** respecting the American difficulty and its ultimate issue operate prejudicially on the trade of this district. For two or three days business goes on steadily, and then a sudden cessation for the next two or three days takes place. This state of things is exceedingly injurious to both masters and workmen, as it destroys all confidence in future prospects. The Coal Trade stands about the same, there being a good demand, but the market is overstocked. So many of the iron-works being only partially employed throws an additional quantity of coal on the market, and increased competition follows. There is a steady demand for coal at Cardiff, Newport, and Swansea; prices are lower, which is principally caused by some coalowners selling at ruinous rates. The Iron Trade remains about the same; there are slight indications of improvement, and several additional furnaces have been blown in, or are about being blown in. This shows the ironmasters have increased confidence in the future, and it is to be hoped their confidence is not misplaced.

Several fatal accidents have occurred during the week. On Tuesday an inquest was held at the Yatlyfer Inn, touching the death of Richard South, a miner, and he was completely buried in the debris. Every exertion was made to clear the fall, but the deceased died before he could be extricated. The jury returned a verdict of “Accidental Death.”—On Friday two workmen were knocked down by an engine on the Dare branch of the Vale of Neath Railway. Strong wind prevailed at the time, which prevented the two men from hearing the approach of the engine. Both were dreadfully mutilated, and one of the poor fellows, named Thomas Morgan, has since died from the injuries he received; the other is lying in a very precarious state.

At the Merthyr Police Court, on Saturday, Wm. Edwards, remanded from the previous Monday, was charged with having stolen a quantity of coal, the property of the Dowlers Company. The novel defence of right to the coal, set up by Mr. Simons, the prisoner's advocate, was fully reported in the *Mining Journal* of last week. Mr. Smith attended on behalf of the Dowlers Company, on Saturday, and said he should withdraw the charge, and the defendant would be served with a writ of trespass, as the company were determined to settle the question. Mr. Simons said the most respectable farmers could prove that they had used the pit's refuse for the last 30 years. The prisoner was then discharged.

A case touching the liability of agents was heard at the last Swansea County Court. Capt. Barratt, master of the steamer *Hydra*, summoned George Ace, agent of the Yatlyfer Iron Company, at Swansea, for non-payment of 117. 10s. 5d., wages alleged to be due. The captain said he had been engaged with the defendant as master of the steamer. He saw no other person. The steamer traded between the Yatlyfer Iron Company's wharf at Swansea and that at Liverpool. Mr. Ace, on being examined, said he only acted as agent of the Yatlyfer Iron Company in engaging the plaintiff. He believed Mr. Budd was the managing director. Judge Falconer held that the defendant was not liable, as he merely acted as agent. Plaintiff was, therefore, nonsuited.

An important meeting of the Swansea Harbour Trust was held on Monday. Considerable discussion took place in reference to the proposed deepening of the channel and river entrance, and it was determined to refer the question to a committee. The following resolution was also passed, “That an application be made to Parliament in the next Session for an Act to enable the trustees to lease or sell the Swansea Harbour Railway and wharves to the Vale of Neath and the Swansea and Neath Railway Companies, or either of them, and for power to raise the further sum of 25,000s. for the several purposes of the Swansea Harbour Trust.”

We shall give a full report of the proceedings at the South Wales Institute meeting, at Merthyr, in next week's *Journal*.

The following vessels have entered the port of Swansea during the week:—Cobier, from Cuba, with 715 tons of copper ore, for the Cobre Company; Flying Spray, from Coquimbo, with 508 tons of copper regulus and 12 tons of unwrought copper in pigs, for H. Bath and Son; Henry Ranking, from Coquimbo, with 504 tons of unwrought copper, for Henry Bath and Son; Conqueror, from Coquimbo, with 398 tons of copper ore, 22 tons of copper in pigs, and 100 tons of copper in bars, for order.

**THE NEATH SHIPPING TRADE**, for the month of November, 1861, was as follows:—Number of vessels, 101, of 6920 tons register.—Imports: 487 tons of iron ore, 2227 tons of copper ore, 440 tons of pig-iron, 420 tons of pit and chemical wood, 184 tons of flour, 3987 quarters of oats, 1125 quarters of barley, 100 quarters of malt, 670 bushels of apples, 70 tons of potatoes, and sundry goods.—Exports: 8677 tons of coal and culm, 1064 tons of iron, 189 tons of copper, 140 tons of tin-plates. The above return does not include vessels and shipments in the dock.

#### TRUTH'S ECHOES;

I would ask what has been the result of the system of forming companies with large capitals during the past few years but a series of disappointments and losses to those who have embarked their capital. There are many mines just entering, and others already in a dividend state that may be bought for less than the amounts asked for to develop old mines and new schemes. It may be said by some that I wish to check mining enterprise; those that know me, however, will not accuse me of any such intention. I am desirous that British mines shall take their stand among the most legitimate investments of the day, and in which the public may invest their capital with every confidence of seeing a fair return for it. I venture to assert that, up to this time, none of the members of the Mining Exchange have applied for a share in the new schemes that have recently been brought out, and to which the attention of the public is being directed. East Caradon, East Carn Brea, Wheal Grylls, South Caradon, West Seton, Tincroft, and many other mines already established, afford ample scope either for speculation or investment, while many of the ephemeral schemes that are now on the *spit* will as surely end in loss and disappointment to the investors.

## MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

DRAKE WALLS sold, on Dec. 6, 22 tons 10 cwt. 5 cwt. 11 lbs. of black tin, for 1641. 1s. 6d.; against cost for same month (Oct.), 1335.

PROSPER UNITED.—The course of ore in the 30 west appears to be improving every day; it is twice as good now as when it was first cut, and what it is going to be no one can tell. Some consider that it is quite a new lode, and not the one they were driving on, as it is taking away fast from it. It appears to have crossed the one they were driving on, and if so, they have it also to the east; it is 4 ft. wide, as fine a course of ore as anyone can see, and also very rich for tin on the north part. The lode is on an elvan course, and running with it. Shareholders would do well not to listen to those who "bear" the shares, and run down the mine from personal motives, and know nothing whatever of its position and prospects; but if the truth is wanted, let the mine be inspected by a competent and trustworthy agent.

BRYN GWIOM is steadily improving, and is now expected to realise the great expectations that it some time since raised. The sampling for the last month was 45 tons, which would leave a profit of over 2000. on the month's working. The proprietors wisely made a call at the last meeting, to put their finances in a sound condition.

ST. IVES WHEAL ALLEN.—This mine has much improved. The 50 east, on Carbone lode, is worth 121. to 141. per fm.; the 30 east, 201. to 251. per fm.; and Richard's shaft, on deep adit, 31. per fm. The report of the agents this week states "The mine never looked better since we have been working it than at present."

NEWLYN AND PERRANZABULOE DISTRICT.—Rumours have of late been rife respecting the re-working of OLD SHEPHERDS MINE, in the parish of Newlyn, and from what has lately appeared in the local papers respecting it, the inhabitants of the neighbourhood generally seem to be fully sensible of the advantages that would accrue from a revival of operations in that and other sets with which the district abounds, and there is a very general impression that the coming spring will more than justify their present anticipations, and withal restore life and activity to this now languishing but once busy locality. We are also glad to learn that our neighbour, Capt. Middleton, has been successful in obtaining grants for the re-working of the PENHALOE MINE (in the parish of Perranzabuloe) with LOMAX included. This latter part, when formerly worked, is said to have been very productive for lead; but owing to the extreme desire to extract all mineral then in view, operations were carried so high that the sea encroached, and the mine in consequence became deluged. It is, however, gratifying to learn that LOMAX has been added to Penhaloe, and that the reports, which have been already received from parties intimately acquainted with the set, are most cheering; and these, coupled with the firm opinion entertained by Capt. Middleton, who last inspected it during the late workings, there is but little doubt that, when offered to the public, it will meet with a hearty welcome, and when fully developed be as remunerative to the adventurers as any in the district.—N. S.: *Perranzabuloe, Dec. 9.*

WHEAL GRYLLS.—Reference is made to the agent's report in another column, which speaks for itself. Annie's engine-shaft is worth 201. per fathom; and Georgia shaft will be commenced next week, worth 751. to 801. per fathom. Ends and winzes worth together 401. to 501. per fathom; driving and sinking at an average of 371. 6d. to 401., which shows the easy nature of the ground. There are 44 men working, at an average tribute of 6s. 4d. 1/2, taking the standard at 601. per ton; and if the tin-stuff were stamped, at the present price of black tin no doubt the tribute would be at 5s. in 1/2, and more profitable. The stamp's engine will go to work this year, when there is but little doubt of 5000. a month profit to the adventurers, and the shares, which are at present at such a ridiculously low price, will, no doubt, go to a very high figure. Those who purchase at once will be well repaid.

HERODSFOOT is doing well; and, from the agent's report, is likely to do so, especially when the new shaft is completed.

NORTH DOLCOATH.—The sinking of the engine-shaft is progressing with all dispatch, now down 4 fms. below the 35, and in a very kindly, strong lead. The 35 is being driven east, and will soon be under the point in the 20 where a small bunch of copper was met with, giving indications of increase in depth. These shares are well worth attention at the present very low figure.

NORTH CROFTY continues to look well; the 150 end is now worth 107. per fm., and looking favourable to enter soon a good course of tin. The copper department, in the 60 and 70 is also much improved. At the next audit no call will be required, and the accounts will probably show a profit on the quarter.

EAST PROVIDENCE.—The lode in the winze continues good, and the mine is looking well.

NEW SOUTH CARADON.—This mine being situated immediately west of the Caradon Mine is creating some attention. It embraces most of the productive lodes which are wrought on in these mines. The geological features of the set are similar to South Caradon, being a granite hill of about the same altitude and formation, within a short distance of Killas. Several lodes have been opened on shallow. An adit level is being driven on a copper lode, from 3 to 4 ft. wide, of great promise; the present depth is shallow, but by continuing the driving about 15 to 20 fathoms, as the hill rises fast, it will leave from 35 to 40 fathoms back. The richness of South Caradon was discovered by driving a similar adit into the hill; and, from the character of the lode in New South Caradon, a good discovery of copper ore may be expected. Having a sufficiency of water for all mining purposes, the mine will be worked at a comparatively small outlay.

ROSEWARNE CONSOLS.—Reports from the mine continue of the most satisfactory character; and as soon as the ore is cut in the 40 good profits will be gained.

SOUTH CARADON WHEAL HOOOPER.—No lode has yet been discovered in the 47 cross-cut. The boundary lode discovered shallow, and having a southern underride as far as seen, must shortly be intersected in this cross-cut, if it continues its course. There are about 5 fms. to make a communication from the winze to the rise in the back of the 62; the rise has turned out some splendid rocks of copper ore, but is now in the elvan, and the lode split up. A winze will shortly be sunk in the bottom of the 62, and from the appearances of the lode in the bottom of the level a good deposit of copper ore will be met with. One great feature is that the lode is under or will have left the elvana.

The GREAT TREVEDDOE, situate west of the Caradon district, is likely to become a great mine at an early period. The new discovery is exciting quite a sensation.

CUDDIJA.—The lode has been taken down in Walker's shaft; it is 4 ft. wide, and is worth 7 cwt. of black tin per 100 sacks. The 100 west is being driven by the side of the tin lode, and will be taken down in the course of next week; it produces splendid work for tin when cut through. The ends and stope are producing well. This mine is opening out in a most satisfactory manner, and will become a lasting dividend property.

EAGLEBROOK.—This mine is looking well. The 10 west is still worth 25 cwt. of lead ore per fathom.

SOUTH WHEAL KITTY (Uny Lelant).—This mine has been carefully inspected and reported upon by Captain Nicholas Tredinnick. He describes the set as very extensive, being about 400 fms. in length on the course of the lode, and of width quite sufficient for any mine. There are seven known lodes and two cross-courses; these cross-courses frequently have a good effect on the lodes, and make them very productive, as is the case in Wheal Margaret. He thinks the mine is deserving of a fair trial, for which a small engine—say, 24-in. cylinder—must be erected; this will be sufficient to drain the mine, and for stamping purposes. The outlay will not be great, and looking at the various lodes they have in the set, he thinks their chance of success is good. Captain S. Mitchell, jun., the resident agent, also reports favourably upon the prospects of the undertaking. It was proposed to subdivide the shares (the number at present being 1000), but at the special general meeting, on Nov. 30, the consideration of this subject, as well as the question of purchasing an engine, was referred to the next general meeting, when the accounts to the end of November will be submitted.

## FOREIGN MINES.

VICTOR EMANUEL.—Miggindone, Dec. 5: Several important improvements have taken place; the most valuable is in the end of Thompson's level, where the lode is again worth from 2 to 3 tons per fm. We have also a fine lode in the new stope in Falconer's level, where the men are breaking very large rocks of copper ore. Altogether, the mine never looked so well before. We hope to sample next month about 40 tons of very good ore.—Bavona: The re-timbering and draining of the workings in the Miasera Vecchia is being actively carried on. The men broke in, securing one of the old levels last week, a splendid pile of copper ore; nothing can be finer. We hope to see the bottom of the old workings next spring.

WEST CANADA.—Captain Plummer, Nov. 20: Copper Bay Mine: The lode in the new engine-shaft maintains its size and value; the water is quick, and the ground slow of progress. The lode in the winze to the east of this yields 5 tons per fm., and is promising in appearance. We have not got through the dyke in the 10, west of Crace's shaft; the rock, however, is favourable for cutting. The stope to the east and west of Palmer's continues their average productiveness—6 tons or more per fm. The lode in the level east of Palmer's (fire lode) is improved of late, and looks more promising for the future; at present it is slow for driving. We can say much at present as to the value of the lode at the 20, driving east and west of Bray's shaft, as we have just started them. The men have been engaged cutting plat, putting in sills, &c. The stopes in the east of Jennings' shaft continues to yield 5 tons per fm.—Wellington Mine: The level to the east of Grenfell's shaft is very poor; the lode appears to be divided and disordered. The lode in Grenfell's shaft maintains its size, and is yielding 3 tons per fathom. The men who belong to the stopes to the west are engaged putting in stulls for protection, and have not cut any ground since last report. The lode in the 20, west of Crace's shaft, is yielding 2 1/2 tons per fm.; the lode is very slow for cutting. Mitchell's shaft is turning out pretty well, yielding 2 1/2 tons per fm. The lode in the western end of the shaft is poor. The stope east of Hooper's shaft is yielding well—4 to 5 tons per fathom. The lode in the stope to the east and west of Knight's shaft (the lode) is much as usual, yielding 2 1/2 tons per fm. The lode to the west of Colling's is small, but pretty good, yielding 1 1/2 tons per fm. Upon the whole, things are going on favourably, and I think satisfactory progress is being made. The weather has been favourable for this season of the year. We have had little or no snow, and only a few days of frost, so that our surface works have gone on well.

LUSITANIA.—Dec. 5: Palhal Mine—Great Caunter Lode: The lode in the 40, driving west of Oak engine-shaft, is 1 ft. wide, composed of quartz, flocks, and small stones of lead; the lode has an improved appearance.—Basto's Lode: The lode in Taylor's diagonal engine-shaft, below the 60, is worth 2 1/2 tons per fm. The lode in the 60, east of Taylor's shaft, is worth 2 1/2 tons per fm. In the same level west of Abel's winze, the lode is worth 1 ton per fm. In the 50, west of Taylor's shaft, the lode is worth 1 1/2 ton per fm. The stope No. 1, above the 50, west of Ernesto's winze, is worth 1 1/2 ton per fm. The stope No. 2, above the 38, west of Clondino's winze, are worth 1 1/2 ton per fm. The stope No. 4, below the 28, west of Clondino's winze,

are worth 1 ton per fathom. The stope No. 5, above the 38, east of Clondino's winze, are worth 1 ton per fm. In the stope No. 6, above the 50, east of Jackson's winze, the lode is worth 1 1/2 ton per fathom. The stope No. 9, above the adit level, west of Perez shaft, are worth 1 ton per fm.—Mill Lode: In the 50, west of River shaft, the lode is worth 2 1/2 tons per fathom. In the 38, east of Perez's winze, the lode is worth 1 1/2 ton per fm. In the stope No. 10, above the 18, east of Dea's winze, the lode is worth 2 1/2 tons per fathom. In the stope No. 11, above the 38, west of the caunter lode, the lode is worth 2 1/2 tons per fm. The lode in the stope No. 15, above the 38, east of Rodriguez's winze, is worth 2 tons per fathom.—Caunter Lode: In the 50, west of Taylor's shaft, the lode is in branches, and unproductive. The lode in the 30, west of the Mill lode, is split into branches, some of which are producing stones of copper ore, and others stones of lead. In the 18, west of the Mill lode, the lode is worth 1 1/2 ton per fm. The lode in Linz's winze, below the 38, is producing stones of ore.—Great Caunter Lode: In the stope No. 13, above the 20, west of the slide lode, west of Oak shaft, the lode is worth 1 1/2 ton per fm. The stope No. 12, above the 20, are worth 1 ton per fm.—House Lode: In the 30, west of Oak shaft, the lode is small and poor.—Slide Lode: In the 28, west of the Mill lode, the lode is worth 1 ton per fm. In the 28, west of the slide lode, there is a branch which is producing small stones of copper ore.—Carvalhal Mine: In the 10, east of Henrique's winze, the lode is 2 ft. wide, composed of quartz, mica, and lead, worth 1 1/2 ton per fm. of the latter. The lode in the stope in the west end of Henrique's winze is worth 1 1/2 ton per fm.

ENGLISH AND CANADIAN.—H. Williams, Nov. 27: Capt. Oatey and Mr. Hardman, of the Geological Survey, have visited the mines, and have been delighted with the progressive development of the works, and the great beauty of the samples they have taken with them for exhibition in London. They say this will surpass anything from this continent, and take to Sir W. Logan a most favourable report of our operations. I am glad to say that the new lode, Fanny Eliza, is really beautiful, being worth in sight from \$400 to \$500 per fathom, though I do not expect it to continue so handsome and remunerative. I shall be quite content if it continues uniformly half way the above, as it will then give quite handsome returns. I have not yet reached the hanging wall of the lode, and cannot say its width, though I think it will not be less than from 4 to 5 feet; it is coming in across our drivage, hence it takes a little longer to get through than if we had met it at right angles. I will write you again by next mail, and think it will be as well to defer my general report until the middle or end of December, as I shall then be able to say more about this last discovery and its average yield, as I trust by that time to have some fathoms driven upon it.

SALE OF MINE SHARES BY PUBLIC AUCTION.—Mr. T. P. Thomas sold by public auction at Garraway's Coffee-house, Change-alley, on Thursday, the following mining shares:—10 Wheal Henr. 191.; 1 Condurrow, 601.; 1 South Caradon, 3381. 10s.; 25 Tolcarne, 21. 13s. 9d.; 3 Ding Dong, 13s. 2s. 6d.; 20 Tres Side, 2s. 6d.; 20 West Wendron, 12. 9d.; 20 Prosper United, 11. 19s. 6d.; 10 Marke Valley, 101. 5s.; 5 Herward United, 71.; 10 Great Retallack, 12s. 6d.; 10 ditto, 13s. 30 ditto, 13s. 3d.; 1 Long Bake, 131. 15s.; 10 West Trevelyan, 17s.; 10 Wheal Emma (Buckfastleigh), 12s.; 10 ditto, 12s.; 10 North Minera, 11. 1s.; 10 ditto, 11s. 9d.; 10 ditto, 11s. 15s.; 1 ditto, 12s. 2s. 6d.; 10 Wheal Harriet, 29s. 9d.; 15 ditto, 20s. 6d.; 25 Wheal Grenville, 29s. 6d. The sale was well attended by parties connected with the market, and the shares sold realised full market prices; it is, however, to be regretted that a large proportion of the shares submitted were placed in the auctioneer's hands too late to be included in the advertised list or even in the printed catalogues.

## WEEKLY LIST OF NEW PATENTS.

APPLICATIONS FOR LETTERS PATENT.—T. TREBEE, Westbourne-terrace Villas: Machines for boring holes in rocks.—J. BURROWS, of Wigton, and J. DOUGAN, of Haigh: Winding or driving drums or pulleys.—C. and G. WOODWARD, New York: Pumps.—KENNEDY and ARMSTRONG, Lisburn, Ireland: Driving gear.—PULLAN and LAKE, New Cross: Traction engine wheel.—J. KNOWLEDGE, Southwark: Pumps.—W. DICKS, Finsbury, Northampton: Pumps.—C. DAVIS, Mile End: Substitute for copper in coating ships.—A. R. and W. WOODWARD, Manchester: Compound steam-engine.—J. and W. H. BAILEY, Albion-works, Salford: Apparatus for indicating pressure of steam and gases, amount of vacuum, flow of fluids, weight of materials, and speed of bodies either revolving or traversing, and also the employment of alumina or its alloys in their manufacture.—J. T. RUSSELL, and B. L. BROWN, Cwm Tube-works, Sydenham: Manufacture of paper tubes.—C. D. ARCHIBALD, New York, U.S.: Treating atmospheric air and other elastic fluids for motive-power purposes, and in engines and apparatuses to be employed therewith.—B. W. GERLAND, Newton-le-Willows: Sulphate of copper and other salts

easy to attempt to add more than to express their intention of persevering in the same general line of action which has already led to such favourable results.

By order of the Board,  
EDWIN JAMES FARREN, Actuary and Secretary.

HOLLOWAY'S PILLS AND OINTMENT—SURETY AGAINST DANGER.—Since winter has fairly set in, increased caution is required to preserve the health, but notwithstanding every precaution many are afflicted with asthma, pleurisy, bronchitis, ushered in by colds and coughs. Holloway's medicaments are admirably adapted to overcome all inflammatory affections of the chest. The curative properties of the ointment, when rubbed on the chest and back, over respiration and circulation cannot be questioned. Thousands who have tried it for pleural complaints have testified to its power in subduing cough, irritation, and inflammation. Holloway's pills should also be taken in appropriate doses, as they materially expedite the sanative operation of the ointment, and exercise the further advantage of purifying the whole system.

TO MINERS.—WANTED, to go out to the south of St. Paul of Loíra, the residence of the British Commissioner and of the British Consul General, who have been there many years, in the Portuguese province of Angola, south of the line, and the healthiest place on the west coast of Africa, about 30 days passage from Europe, and having monthly steam communication with same.

ONE FIRST-CLASS INTELLIGENT MINE CAPTAIN, to direct one or more copper or other mines, and take charge of same in the occasional absence of the general superintendent, to a scientific English gentleman.

ONE CAPTAIN DRESSER, competent and capable of taking charge of the dressing and washing of copper ore.

ONE MINE SMITH, knowing something of the management of circular saws, steam-engines, &c., a good practical man, capable of setting up any mining machinery.

ONE very good MINE CARPENTER, knowing all about timber sawing by circular saws, &c.

FOUR GOOD MINERS, all well used to blasting.

All applications, with first-class testimonials or references as to character, qualifications, intelligence, steadiness, and sobriety, to be addressed to Mr. L. A. MONTEIRO, 51, Manchester-street, Manchester-square, W., who is fully authorised to treat.

WANTED, ONE OR TWO NEW or SECOND-HAND CONTRACTORS' LOCOMOTIVE ENGINES, with wheels, 4 ft. 6 in. diameter, and not less than 14 in. cylinder.—Apply, with full particulars and price, to CHARLES CLARKE, Smethwick, near Birmingham.

DOLGELLY GOLD MINES.—TO BE SOLD, ONE HUNDRED AND NINETY ACRES FREEHOLD LAND, two miles north-east of the Clogau Gold Mines, having the same quartz veins as seen there. Abundant water-power and timber, farm-house and buildings. Will be sold on very moderate terms.—Apply to Mr. BELL WILLIAMS, 40, North John-street, Liverpool.

GOLD GETTING MACHINES, for Nova Scotia. Also, the NEW PATENT HYDRAULIC PRESS, important to shippers, packers, and seed crushers, weighing only a few hundred weight instead of tons. Can be seen at the patentee's, J. WALKER, 17, Cowper-street, City-road.

CRYSTAL PALACE—EXHIBITION SPACE.—The forthcoming season being one of great interest to intending exhibitors of all classes, the directors of the Crystal Palace, Sydenham, are PREPARED TO RECEIVE APPLICATIONS for the EXHIBITION of SPECIAL and IMPORTANT ARTICLES of MANUFACTURES, under arrangements to be agreed upon.

CRYSTAL PALACE—EXHIBITION SPACE.—The COURT OF INVENTIONS and the INDUSTRIAL COURTS have recently been ENLARGED and RE-ARRANGED, and they offer great advantages to inventors and manufacturers during the Exhibition of 1862.

CRYSTAL PALACE—EXHIBITION SPACE.—The CARRIAGE DEPARTMENT at the Crystal Palace has been EXTENDED, and will be found very advantageous to exhibitors for the sale of carriages, as well as affording the greatest publicity. Ample accommodation can also be provided for the exhibition of machinery, for which steam-power will be supplied.

BELL BROTHERS beg to intimate that, having become SOLE LICENSEES in the United Kingdom of Psor. DEVILLE'S METHOD of PRODUCING PURE ALUMINIUM, they are now in a POSITION TO SUPPLY, from their works here, both this metal and its compound with copper, known under the name of ALUMINIUM BRONZE.—Newcastle-on-Tyne, September, 1860.

FONT COMPANY (ALEXAND

## NATIONAL ASSOCIATION FOR THE RELIEF OF BRITISH MINERS.

23, REGENT STREET, WATERLOO PLACE, PALL MALL, LONDON.

The almost daily catastrophes that arise from imperfect ventilation of mines, such as the Blaenau calamity, whereby 145 fellow-creatures were hurried into eternity, give some idea of the precarious nature of the miner's existence. Violent deaths in collieries exceed 1000 every year, and upwards of 10,000 are permanently injured. These facts have suggested the establishment of the National Association for the Relief of British Miners, the objects of which are—

1.—To reward the discovery of an improved plan of ventilation, to offer prizes annually to the managers or underground viewers who have exhibited the greatest care in providing for the health and safety of the miner.

2.—To afford immediate relief to all sufferers from colliery casualties.

3.—To establish schools, and afford aid to those existing.

Subscriptions received by the treasurer, Sir J. LUMSDEN, Bart.; Sir SAM'L SCOTT, Bart., and Co., 1, Cavendish-square, W.; Messrs. ROBERTS and Co., Mansion-house-type; and London and County Bank, Southwark; and at the offices of the association.

HADDOCK DENNYS, Secy.

## THE LLANMORLAIS COLLIERY COMPANY (LIMITED).

Capital £20,000, in 10,000 shares of £2 each.

10s. per share to be paid on application, and 10s. on allotment.

DIRECTORS.

A. C. HOWDEN, Esq., 71, Boundary-road, St. John's-wood, N.W.  
Col. R. Y. BUSH, 55, York-terrace, Regent's-park, N.W.  
Capt. J. D. MACQUEEN, Whitehall-yard, S.W.  
THOS. P. AUSTIN, Esq., 35, Marl-lane, E.C.  
S. W. HOOVER, Esq., 45, Fleet-street, E.C.  
W. C. KIRKHAM, Esq., 15, St. Anne's-square, Manchester.

BANKERS.—The City Bank, Threadneedle-street, London.

SOLICITORS.—Messrs. Hancock, Sharp, and Hales, 20, Tokenhouse-yard.

BROKER.—F. Everett, Esq., 17, Royal Exchange.

OFFICIAL AUDITOR.—F. Maynard, Esq., Accountant, 19, Bread-street, Cheapside.

(Another to be chosen by the shareholders.)

SECRETARY.—Mr. Charles Warwick.

OFFICES.—25, BUCKLERSBURY, LONDON, E.C.

This company has been formed for the working of extensive grants of coal, situate in the Gower district, nearly opposite Llanelli, South Wales.

The coal of this district is admitted to be of the very best quality, is highly bituminous, in great demand for house, gas, smiths, and manufacturing purposes.

Two large seams have been already won, and shipments can soon be made.

Detailed prospectuses can be obtained, and samples of the coal seen, at the offices of the company. Application for shares may be made to the bankers, brokers, or secretary. The application must be accompanied by a deposit of 10s. per share on the number of shares applied for. If no shares be allotted, the deposit will be returned in full.

## ATLAS COAL COMPANY (LIMITED).

Capital £10,000, in 2000 shares of £5 each.

Deposit, £1 per share on application, and £1 per share on allotment. The remainder in calls of 10s. per share, at intervals of not less than three months.

Registered under the Joint-Stock Companies Act of 1856 and 1857, whereby the liability of the shareholders is limited to the amount subscribed.

Interest at the rate of £5 per cent. per annum will be allowed upon all calls paid in advance.

DIRECTORS.

THOMAS MANSBRIDGE, Esq., 68, Wood-street, Cheapside, Chairman.  
Lord STEPHEN ALGERNON CHICHESTER, Army and Navy Club, St. James's-square.  
JAMES SCHOFIELD, Esq., Providence Mill, Lee, near Manchester.  
WILLIAM BELL, Esq., Manchester-street, Heywood, Lancashire.  
THOMAS FREDERICK HORWOOD, Esq., 45, Mark-lane, E.C.  
DAVID MILLS, Esq., Moss House, Hale, Altrincham, Cheshire.  
EDWARD WIX, Esq., Trafalgar-square, Peckham.

BANKERS.—Messrs. Olding, Osborne, and Co., Clement's-lane, Lombard-street, E.C.

SOLICITOR.—Joshua Pedler, Esq., 11, Poultry, E.C.

BROKERS.—Messrs. Ross, Lainson, and Bedford, 4, Lombard-street, E.C.

SECRETARY.—Mr. Arthur Mayor.

OFFICES.—53, MOORGE STREET, LONDON, E.C.

Full prospectuses, with reports by Edward Foxall, Esq., C.E., of Cinderford, Forest of Dean, and J. W. Walkenshaw, Esq., C.E., of Coleford, Gloucestershire, may be had at the offices of the company or brokers, where applications for shares and every information may be obtained.

Application for shares, accompanied with a deposit of £1 per share, to be forwarded to the bankers, brokers, or secretary of the company.

## ATLAS COAL COMPANY (LIMITED).—NOTICE.

Notice is hereby given, that the directors will PROCEED TO CONSIDER the APPLICATIONS RECEIVED, and make the necessary ALLOTMENTS, on the 24th instant.

By order of the Board, A. MAYOR, Secy.

## ATLAS COAL COMPANY (LIMITED).—NOTICE.

APPLICATIONS FOR SHARES must be forwarded to the brokers or secretary on or before the 21st instant.

By order of the Board, A. MAYOR, Secy.

## THE CARDIGANSHIRE CONSOLIDATED MINING COMPANY (LIMITED).

Increase of nominal capital to £50,000. In 10,000 shares of £5 each.

The shareholders will not be liable beyond the amount of their respective subscriptions. 5s. per share to be paid with application, and 15s. per share on allotment.

DIRECTORS.

CHARLES COPLAND, Esq. (Messrs. Copland and Co.), Bury-street, St. Mary Axe.  
JOHN KILNER, Esq., Bury St. Edmunds.  
PARKE PITTR, Esq. (Messrs. P. Pittar and Co.), 26, Gresham-street.  
PERCY MARSH SHARP, Esq. (Messrs. Hancock, Sharp, and Hales), 20, Tokenhouse-yard. (With power to add one more.)

SOLICITORS.—Messrs. Hancock, Sharp, and Hales, 20, Tokenhouse-yard.

CONSULTING MINING ENGINEERS.—Messrs. Phillips and Darlington, 26, Gresham-street.

BANKERS.—London and Westminster Bank, Lombard-street.

AUDITOR.—Charles Eley, jun., Esq., 27, Great George-street, Westminster.

LONDON MANAGER, AND OFFICES.—J. H. Murchison, Esq., No. 117, Bishopsgate-street Within.

BROKERS.

London ..... Messrs. Alexander and Lindow, 21, Tokenhouse-yard.  
Manchester.... James Gorton, Esq., Newmarket Chambers.  
Aberdeen.... H. C. Oswald, Esq., Marischall-street.  
Exeter..... Mr. John Harris.  
Dublin..... Messrs. Smyth and Du Bédat, 11, College Green.

This company holds the celebrated lead and copper mines known as Esgair-hir and Esgair-fraith, situate in the rich mineral district of Cardiganshire, and which many years ago made enormous returns.

These mines are also on the same lode as the Dylife Mine, for which Mr. Bright, M.P., and his friends, gave £24,000, and having laid out £10,000 more in explorations, &c., their returns are now upwards of 200 tons of lead ore per month, which it is believed give a profit of about £1000 per month. The Cardigan Consols Mines are yet only 60 fms. from surface, and the sett extends two miles on the course of the lodes.

Applications for shares, in the form annexed to the prospectus, accompanied by a deposit of 5s. per share, may be addressed to the directors, or to the brokers. On allotment, 15s. per share additional will have to be paid, but if no shares are allotted the deposit will be returned.

Detailed prospectuses, with the reports, and forms of application for shares, may be obtained at the office, 117, Bishopsgate-street Within, E.C., or from any of the brokers. The prospectus will also be found at length in the *Times*, *Daily News*, *Morning Post*, *Economist*, *Mining Journal*, and *Limited Liability Journal*, of 30th November.

## PATENT MOVABLE FIRE BAR COMPANY (LIMITED).

DIRECTORS.

SAM'L. BLACKWELL, Esq., Ironmaster, Dudley.  
SAM'L. THORNTON, Esq., Merchant, Birmingham.  
JONATHAN GRINDROD, Esq., C.E., Liverpool.  
JOHN LLOYD, Esq., Engineer, Llanelly.  
OFFICES.—16, HACKIN'S HEY, LIVERPOOL.

## WRIGHT'S PATENT BARS FOR LOCOMOTIVE, MARINE, AND STATIONARY BOILERS, PUDDLING AND OTHER FURNACES.

The proprietors have great pleasure in recommending the above as the simplest and best arrangement in use. The bars have already been adopted by some of the leading firms in the Midland Iron District, in various channel and ocean-going steamers, and the large breweries in Burton and have, in every case, given great satisfaction.

For prices charged, apply at the company's office, Liverpool.

AGENTS WANTED; also, TENDERS from ironfounders for CASTING THE BARS.

HALL AND WELLS, PATENTEES AND MANUFACTURERS OF SUBMARINE TELEGRAPH CORES, CABLES, &c.—TELEGRAPH CONDUCTORS INSULATED WITH INDIA RUBBER at £5 per mile and upwards, PARTICULARLY ADAPTED FOR MINING PURPOSES. Further particulars as to prices of cores, cables, &c., can be had on application at 60, Aldermanbury, City, E.C.; and Steam Mills, Mansfield-street, Borough-road, Southwark, S.E. Copper wire covered with silk, cotton, or any other material, to order.

## ALBERT AND MEDICAL LIFE ASSURANCE, 7, WATERLOO PLACE, PALL MALL, LONDON, S.W.

ESTABLISHED 1838.

The business of the Medical, Invalid, and General Life Assurance Society having been amalgamated with the Albert Life Assurance Company, the united business will henceforth be carried on under the above title.

Accumulated fund exceeds ..... £500,000.

Subscribed capital ..... 447,180.

Paid-up capital ..... 137,000.

Annual income from life premiums, upwards of ..... 220,000.

The new business is now progressing at the rate of more than £25,000 per annum. From Prof. Dr. Morgan's report upon the last valuation of liabilities (end of 1858), and the statements of accounts, it appeared at that time that the surplus in favour of the Albert business alone, after providing for every liability, was £192,926 2s. 1d.

HENRY WILLIAM SMITH, Actuary.

C. DOUGLAS SINGER, Secy.

TO CAPITALISTS.—MESSRS. LEICESTER AND CO., INSPECTORS AND VALUERS OF MINES, &c., MELBOURNE, VICTORIA, OFFER THEIR SERVICES TO SELECT AND INVEST CAPITAL IN MINING PROPERTIES, for which they charge 2½ per cent.; and they also COLLECT and TRANSMIT the DIVIDENDS, charging 2½ per cent. on their amount. MESSRS. LEICESTER AND CO. earnestly call the attention of capitalists to the many opportunities they possess of investing, to pay from £200 to £150 per cent. per annum. Sums under £50 will be charged extra. All remittances must be made through our agent, Mr. RICHARD MIDLTON, *Mining Journal* office, 26, Fleet-street, London; or direct through our bankers the Union Bank of Australia.

In the Court of the Vice-Warden of the Stannaries.  
Stannaries of Cornwall.

## IN RE WHEAL REETH MINE.

TO BE SOLD, pursuant to an Order made in a Cause of Pearce and Others v. Traweeks the younger, dated the 13th day of November last, BY PUBLIC AUCTION, at the Registrar's Office, Truro, on Tuesday, the 24th day of December inst., at Twelve o'clock at noon precisely—

4 (240th) SHARES of the said defendant.

Of and in the said MINES.

HODGE, HOCKIN, AND MARRACK, Plaintiff's Solicitors, Truro.

Dated Registrar's Office, Truro, December 9, 1861.

In the Court of the Vice-Warden of the Stannaries.  
Stannaries of Cornwall.

## HARVEY AND OTHERS v. HALL.

## IN RE NORTH PROVIDENCE MINE.

TO BE SOLD, pursuant to an Order made in the above-mentioned Cause, BY PUBLIC AUCTION, at the North Providence Mine, in the parish of St. Ives, on Monday, the 30th day of December inst., at Twelve o'clock at noon, a NEW CAPSTAN ROPE, 130 fms., 12 in. thick.

To view the same, apply to Mr. MARTIN DUNN, jun., auctioneer, St. Ives.

HODGE, HOCKIN, AND MARRACK, Plaintiff's Solicitors, Truro.

Dated Registrar's Office, Truro, December 9, 1861.

In the Court of the Vice-Warden of the Stannaries.  
Stannaries of Cornwall.

IN the MATTER of the ST. AUBYN MINERAL COMPANY (LIMITED), and in the MATTER of the JOINT-STOCK COMPANIES ACTS, 1856-57.—By direction of the Vice-Warden of the Stannaries, to whose Court the winding-up of this company belongs, notice is hereby given that the said Court will, on Monday, the 30th day of December inst., at Eleven o'clock in the forenoon, at the Registrar's office of the said Court, at Truro, in the county of Cornwall, PROCEED TO MAKE A CALL on all the contributors of the said company whose names are included in the list of contributors, so far as the same has been at present settled, to the full extent of the several monies found due and unpaid by the said several contributors respectively.

All persons interested are entitled to attend at the time and place aforesaid, to offer objections to such call.

CHAUNTLER AND CROUCH, 8, Gray's Inn-square, London.

WM. MICHELL, Registrar of the said Court.

Dated Registrar's Office, Truro, December 6, 1861.

In the Court of the Vice-Warden of the Stannaries.  
Stannaries of Cornwall.

## PURSUANT to an Order made in the Cause of Harvey and

Others v. Hall, the CREDITORS in respect of NORTH PROVIDENCE MINE, in the parish of St. Ives, within the said Stannaries, are, on or before the 31st day of December next, to COME IN and PROVE THEIR DEBTS before the Registrar of the said Court, at his office, in Truro, or in default thereof they will be peremptorily excluded the benefit of the said Decree.

Dated Registrar's Office, Truro, December 12, 1861.

## In the Court of Bankruptcy, London.

IN the MATTER of the JOINT-STOCK COMPANIES ACTS, 1856, 1857, and in the MATTER of the CLARA SILVER-LEAD MINING COMPANY (LIMITED).—Notice is hereby given, that a PETITION has been PRESENTED to Her Majesty's Court of Bankruptcy, in London, for WINDING-UP the CLARA SILVER-LEAD MINING COMPANY (LIMITED), pursuant to the provisions of the Joint-Stock Companies Acts, 1856, 1857, and of the Joint-Stock Companies Amendment Act, 1858, and that such petition will, by order of the said Court, be heard before Mr. Commissioner Fonblanche, the Judge to whose Court the said petition is attached, at the Court of Bankruptcy, Basinghall-street, London, on the 24th day of December last, at Eleven of the clock in the forenoon precisely.

MR. E. A. MARSDEN, Solicitor for the Petition, 30, Walbrook, London.

Dated the 12th day of December, 1861.

## STEAM ENGINE FOR SALE, WITHOUT RESERVE.

MR. W. F. CONGDON has received instructions to SELL, BY PUBLIC AUCTION, a 45 in. DOUBLE-ACTION STEAM ENGINE, of about 150 horse power, 9 ft. stroke, horizontal movement, with large fly-wheel, in eight segments, strong cast-iron framing, &c., complete, without boiler, and nearly new, at Great Poldgate Mine, St. Austell, on Monday, the 23d inst., at Three o'clock in the afternoon.

For further particulars, apply to Mr. Wm. Browne, St. Austell, or to the auctioneer.

Dated St. Austell, December 11, 1861.

## SHARES IN THE LAXEY MINES.

MR. RABY respectfully informs capitalists that he has received instructions to SELL, BY AUCTION, on Friday, 27th December, 1861, in St. George's Hall, Atholl-street, Douglas, TWO SHARES AND ONE THIRD SHARE in the well-known and VALUABLE LAXEY MINES.

It is needless to comment upon the richness and the quantity of the produce, that being so well known to parties interested in mining generally. The value even of the plant and machinery is worth thousands, the mines are inexhaustible, and the whole property is invested in the hands of only a few holders.

The great price generally realised for one of these shares often precludes parties who are desirous to be interested in them, and in order to overcome that difficulty purchasers will have the option of taking small fractional parts of a share.

## VENTILATION OF MINES.

ELLIS LEVER,  
WEST GORTON WORKS, MANCHESTER,  
MANUFACTURER OF THE  
IMPROVED SAFETY BRATTICE,  
FOR AIR-COURSES, FLY-DOORS, AND STOPPINGS,

## WORKINGS OF FIERY COLLIERIES.

ELLIS LEVER DESIRES TO INFORM the OWNERS and MANAGERS of COLLIERIES in all parts of the kingdom that THEY CAN BE SUPPLIED at a DAY'S NOTICE with a STOCK of AIR-PROOF BRATTICE or DOOR CLOTH of ANY WIDTH, and in VARIOUS QUALITIES, from SIXPENCE PER SQUARE YARD.

Several miles of the FLEXIBLE TUBING, INVENTED and MANUFACTURED by ELLIS LEVER, is now USED for the PURPOSE of VENTILATION in SINKING SHAFTS and EXPLORING DRIFTS. This TUBING is AIR-PROOF and WATER-PROOF, can be made any size, from 6 inches diameter to 3 feet diameter, in unlimited lengths. Every tube is fitted internally with hoops, 12 inches apart, which prevent their collapsing.—Prices and further information will be sent on application to

ELLIS LEVER, MANCHESTER.

A YOUNG'S PATENT SAFETY CAGE AND HOIST. CHANGE OF LICENSE FEE WILL SHORTLY TAKE PLACE, from £1 to £6 and upwards.

[See *Mining Journal* of November 29.]

Apply to the patentee, ROBERT AYOUNG, 6, Fettes-row, Edinburgh.

PATENT SAFETY FUSE.—The GREAT EXHIBITION PRIZE MEDAL was AWARDED to the MANUFACTURERS of the ORIGINAL SAFETY FUSE, BICKFORD, SMITH, DAVEY, and PRYOR, who beg to inform Merchants, Mine Agents, Railway Contractors, and all persons engaged in Blasting Operations, that, for the purpose of protecting the public in the use of a genuine article, the PATENT SAFETY FUSE has now a thread wrought into its centre, which, being patent right, infallibly distinguishes it from all imitations, and ensures the continuity of the gunpowder.

This Fuse is protected by a Second Patent, is manufactured by greatly improved machinery, and may be had of any length and size, and adapted to every climate.

Address.—BICKFORD, SMITH, DAVEY, and PRYOR, Tuckingtonmill, Cornwall.

DAVEY'S PATENT BLASTING POWDER, MANUFACTURED BY DAVEY BROTHERS AND CO., NANCEKUKE POWDER WORKS, TUCKINGMILL, CORNWALL.

This blasting powder possesses the following advantages over every other in use:—Its COMBUSTION is SLOWER and MORE PERFECT when confined in use; it is MORE IMPERVIOUS to MOISTURE, PRODUCES LESS SMOKE, is LESS DANGEROUS, IT BURSTS AS MUCH ROCK with a CHARGE OCCUPYING THE SAME or even LESS SPACE, and its WEIGHT being TWENTY TO TWENTY-FIVE PER CENT. LESS than ordinary gunpowder, a SAVING of ONE-FOURTH the COST is EFFECTED.

DAVEY BROTHERS and Co. beg to state that this powder is specially made for blasting, and from its slow combustion is not adapted for projectiles. They would, therefore, caution consumers not to be induced by interested parties to put it to a fallacious trial, by firing a ball from a mortar, which is no test of its explosive force when confined.

BASTIER'S PATENT CHAIN PUMP, APPARATUS FOR RAISING WATER ECONOMICALLY, ESPECIALLY APPLICABLE TO ALL KINDS OF MINES, DRAINAGE, WELLS, MARINE, FIRE, &c.

J. U. BASTIER begs to call the attention of proprietors of mines, engineers, architects, farmers, and the public in general, to his new pump, the cheapest and most efficient ever introduced to public notice. The principle of this new pump is simple and effective, and its action is so arranged that accidental breakage is impossible. It occupies less space than any other kind of pump in use, does not interfere with the working of the shafts, and unites lightness with a degree of durability almost imperishable. By means of this hydraulic machine water can be raised economically from wells of any depth; it can be worked either by steam-engine or any other motive power, by quick or slow motion. The following statement presents some of the results obtained by this hydraulic machine, as daily demonstrated by use:—

1.—It utilises from 90 to 92 per cent. of the motive power.

2.—Its price and expense of installation is 75 per cent. less than the usual pumps employed for mining purposes.

3.—It occupies very small space.

4.—It raises water from any depth with the same facility and economy.

5.—It raises with the water, and without the slightest injury to the apparatus sand mud, wood, stone, and every object of a smaller diameter than its tube.

6.—It is easily removed, and requires no cleaning or attention.

A mining pump can be seen daily at work, at Wheal Concord Mine, South Sydenham, Devon, near Tavistock; and a shipping pump at Woodside Graving Dock Company (Limited), Birkenhead, near Liverpool.

J. U. BASTIER, sole manufacturer, will CONTRACT to ERECT his PATENT PUMP at HIS OWN EXPENSE, and will GUARANTEE IT FOR ONE YEAR, or will GRANT LICENCES to manufacturers, mining proprietors and others, for the USE of his INVENTION.

OFFICES, 19, MANCHESTER BUILDINGS, WESTMINSTER, LONDON.

London, Oct. 10, 1861. Hours from Ten till Four. J. U. BASTIER, C.E.

PATENT LEVER BREAK, FOR RAILWAY WAGONS, doing away with the objectionable break rack. Can be APPLIED to EXISTING STOCK at a TRIFLING EXPENSE. Royalty moderate. (Models can be seen at No. 1, Moorgate, London, E.C.; and the breaks in action at the works of the Railway Company; at the Peterboro' Station, on the Eastern Counties Railway; the Rugby Station, London and North-Western Railway; the Cardiff Docks Station, Taff Vale Railway; and at the Works, Oldbury, near Birmingham, where all communications are requested to be sent.)

A USTRALIA AND NEW ZEALAND WHITE STAR EX-ROYAL MAIL CLIPPERS, SAILING FROM LIVERPOOL to MELBOURNE on the 1st and 20th of every month.

\* Passengers holding Victoria passage warrants will be forwarded to Melbourne by these vessels.

Ship. Captain. Register. Burthen. To sail. STAR OF INDIA ..... BUCHAN ..... 1697 ..... 5000 ..... Dec. 20. TELEGRAPH ..... SULLY ..... 1118 ..... 3350 ..... Jan. 20.

The magnificent packet ship, *Star of India*, is quite new, having only made one voyage from St. John's to Liverpool, on which occasion she proved herself to be a very fast and comfortable ship. She was built by Messrs. Wright, the well-known builders of the *White Star*, *Morning Light*, and other famous clippers, the former of which has made the passage to Melbourne in 69, 70, and 71 days, and she combines most of the improvements required in first-class passenger ships. Her saloons are roomy and handsomely furnished, bedding, linens, and all necessaries being found in this class. Her accommodations for second cabin, intermediate and steerage passengers are very superior.

For freight or passage apply to the owners, H. T. WILSON and CHAMBERS, 21, Water-street, Liverpool; or SEYMOUR, PEACOCK, and Co., 124, Bishopton-street, and 55, Parliament-street; or SETON, PEACOCK, and Co., 116, Fenchurch-street, London.

Willow's Australian and New Zealand hand-books sent for two stamps.

TO INVENTORS.—All INTENDING PATENTEEs should PROCURE the PRINTED INFORMATION regarding PATENTS, their COST, and the MODE of PROCEDURE to be adopted, ISSUED GRATIS by the GENERAL PATENT COMPANY (LIMITED), 71, FLEET STREET, LONDON.

R. MARSDEN LATHAM, Secy.

INVENTORS' ALMANAC for 1862. Fourth annual issue. Copyright. Coloured sheet. Contains Classification of British Patents for 1860, according to locality of applicant, and Analysis according to subject, prepared expressly for this almanac. Also, Chronological Table of Important Inventions, Patent Officials and Statistics, Birthdays of Inventors, &c.

Compiled by Mr. HENRY, Mem. Soc. Arts, Patent Registration and Copyright Agent, Patent Office, 84, Fleet-street, London. Sold by Watson and Son, 3, St. Ann's-lane, General Post Office, E.C.

Price 6d. mounted.

INVESTMENTS IN BRITISH MINES.—Mr. MURCHISON publishes a QUARTERLY REVIEW OF BRITISH MINING, giving at the same time the POSITION and PROSPECTS of the MINES at the end of each Quarter, the DIVIDENDS PAID, &c.; price One Shilling. RELIABLE INFORMATION and ADVICE will at any time be given by Mr. MURCHISON, either personally or by letter, at his Offices, No. 117, BISHOPSGATE-STREET WITHIN, LONDON, where copies of the above publication can be obtained.

OPINIONS OF THE PRESS ON MR. MURCHISON'S WORK ON BRITISH MINING, PUBLISHED IN 1860.

Mr. Murchison's new work on British Mines is attracting a great deal of attention, and is considered a very useful publication, and calculated to considerably improve the position of home mine investments.—*Mining Journal*.

The book will be found extremely valuable.—*Observer*.

A valuable guide to investors.—*Herald*.

Mr. Murchison takes sound views upon the important subject of his book, and has placed, for a small sum, within the reach of all persons contemplating making investments in mining shares that information which should prevent rash speculation and unproductive outlay of capital in mines.—*Morning Herald*.

A valuable little book.—*Globe*.

Of special interest to persons having capital employed, or who may be desirous of investing in mines.—*Mining Chronicle*.

As a guide for the investment of capital in mining operations is inestimable. One of the most valuable mining publications which has come under our notice, and contains more information than any other on the subject of which it treats.—*Derby Telegraph*.

Parties requiring information on mining investments will find no better and safer instructor than Mr. Murchison.—*Leeds Times*.

To those who wish to invest capital in British Mines, this work is of the first importance.—*Welsman*.

This is really a practical work for the capitalist.—*Stockport Advertiser*.

This work enables the capitalist to invest on sound principles; in truth, it is an excellent guide.—*Plymouth Journal*.

All who have invested, or intend to invest, in mines, would do well to consult this very useful work.— *Ipswich Express*.

Persons desirous to invest their capital in mining speculations will find this work a very useful guide.—*Warwick Advertiser*.

We believe a more useful publication, or one more to be depended on, cannot be found.

*Plymouth Herald*.

Those interested in mining affairs, or who are desirous of becoming speculators should obtain and carefully peruse the work.—*Monmouth Beacon*.

With such a work in print, it would be gross neglect in an investor not to consult this before laying out his capital.—*Poole Herald*.

Every person connected, or who thinks of connecting himself, with mining speculators should possess himself of this book.—*North Wales Chronicle*.

Mr. Murchison will be a safe and trustworthy guide, so far as British Mines are concerned.—*Bath Express*.

## BEDFORD IRONWORKS, TAVISTOCK.

NICHOLLS, WILLIAMS, AND CO. have generally a GOOD STOCK of SECOND-HAND MINING MATERIALS FOR SALE. They also MANUFACTURE STEAM ENGINES of every description on the newest principle. Castings and wrought-iron work made at the shortest notice. Machinery sent to all parts of the world. Steam boilers and chains warranted of the best description.

RAILWAY WAGONS.—WILLIAM A. ADAMS AND CO., MIDLAND WORKS, BIRMINGHAM.

BROAD AND NARROW GAUGE COAL AND IRONSTONE WAGONS.

IN STOCK—FOR SALE OR HIRE.

RAILWAY WAGONS.—WILLIAM HARRISON AND CAMM HAVE ON HAND RAILWAY, COAL, COKE, AND MINERAL WAGONS, ON SALE OR HIRE,

AT THE ROTHERHAM WAGON WORKS, MASBRO.

THE BIRMINGHAM WAGON COMPANY (LIMITED) HAS RAILWAY WAGONS FOR HIRE.

Apply to the SECRETARY, 3, Newhall-street, Birmingham.

THE RAILWAY CARRIAGE COMPANY, OLD BURY, NEAR BIRMINGHAM.

MANUFACTURERS OF EVERY DESCRIPTION OF RAILWAY PLANT AND IRONWORK.

NEW AND SECOND-HAND RAILWAY WAGONS ALWAYS IN STOCK FOR SALE OR HIRE.

LONDON OFFICES.—No. 1, MOORGATE.

ELectric Telegraph Contractors SUPPLIED with MALLEABLE IRON CASTINGS to pattern.

T. SHORT AND CO., 70, LEGGE STREET, BIRMINGHAM.

RAILWAY CONTRACTORS SUPPLIED with MALLEABLE IRON CASTINGS to pattern.

T. SHORT AND CO., 70, LEGGE STREET, BIRMINGHAM.

IRON PLATE WORKERS, BRAZIERS, and GALVANIZERS SUPPLIED with MALLEABLE IRON NIPPLES for SUGAR CONES to pattern.

T. SHORT AND CO., 70, LEGGE STREET, BIRMINGHAM.

NOTICE TO RAILWAY COMPANIES.—A RAILWAY SIGNAL of a NOVEL DESCRIPTION (patented) is NOW IN OPERATION on the MANCHESTER and ALTRINCHAM RAILWAY, which GIVES NOTICE of the APPROACH of a TRAIN HALF A MILE OFF, and, if required, can announce it at any other given distance. It is novel and simple in its construction, not a single complicated movement in it, and when laid down will not require repairs for years. A model may be seen at the *Mining Journal* office, 26, Fleet-street, London, in the course of a week, and a gentleman will shortly call on the different railway companies centering in the metropolis to give any required explanations.

TRACTION ENGINES FOR STEEP INCLINES.—

It is proposed to form a limited company, with a capital of £70,000, in 70 shares of £100, for the purpose of bringing into use the protected invention of Mr. John Marshall, C.E., by means of which engines can be constructed for the conveyance of from 10 to 50 tons, according to size and weight of engine, on ordinary roads having an inclination as steep as 1 in 4.—Specifications, with formulae, on application to L. C. HERTZLER, Esq., 448 West Strand, London.

STEAM ENGINE FOR SALE.—A 36 in. cylinder STEAM ENGINE FOR SALE, equal to new, with 10 ton BOILER, to be seen at Wheal Trevallyn Mine, Goldsithney, near Marazion.—For further particulars, apply to Mr. E. KING, 27, Austinfriars, London.

TRADE MARK ..... JAMES RUSSELL AND SONS, CROWN TUBE WORKS, WEDNESBURY, STAFFORDSHIRE.

WAREHOUSE.—81, UPPER GROUND STREET, BLACKFRIARS, LONDON, S.

THE ORIGINAL INVENTORS OF WROUGHT IRON TUBES for GAS, WATER, &c. LAP-WELDED BOILER TUBES, HOMOGENEOUS TUBES for BOILERS, &c. GALVANISED and ENAMELLED TUBES, SCREWING TACKLE, STEAM and WATER GUAGES, and EVERY VARIETY of FITTINGS.

JOB TAYLOR AND CO., SWAN FOUNDRY, OLBURY, NEAR BIRMINGHAM,

SOLE PROPRIETORS of HINTON'S PATENT CUPOLA, which CONSUMES FIFTY PER CENT. LESS COKE than any cupola yet invented. MAKERS of ALL KINDS of MACHINERY connected with the GRINDING and TEMPERING of EVERY SORT of CLAY or MARL, and for the MANUFACTURE of BRICKS, TILES, DRAIN PIPES, &c. Also, of HIGH and LOW PRESSURE STEAM ENGINES of any dimensions, and of GENERAL MACHINERY.

LOYD AND LLOYD, ALBION TUBE WORKS, BIRMINGHAM,

MANUFACTURERS of PATENT LAP-WELDED IRON TUBES, for LOCOMOTIVE, MARINE, and STATIONARY BOILERS.

IMPROVED HOMOGENEOUS METAL TUBES.

ALL DESCRIPTIONS of TUBES and FITTINGS for GAS, STEAM and WATER, PLAIN, GALVANISED and ENAMELLED.

GUN-METAL STEAM GLAND COCKS, WATER GAUGES, &c.

SHORTRIDGE, HOWELL, and CO., HARTFORD STEEL WORKS, SHEFFIELD, SOLE MANUFACTURERS of HOWELL'S PATENT HOMOGENEOUS METAL PLATES for BOILERS, LOCOMOTIVE FIRE BOXES, and TUBES, COMBINING the STRENGTH of STEEL with the MALLEABILITY of COPPER. RUSSELL and HOWELL'S PATENT CAST STEEL TUBES. McCONNELL'S PATENT HOLLOW RAILWAY AXLES.—For prices and terms, apply to SHORTRIDGE, HOWELL, and CO., Hartford Steel Works, Sheffield; or Messrs. HARVEY and CO., 12, Haymarket, London.

CORNISH BORER STEEL.—Upwards of ONE HUNDRED AND SIXTY MINES are SUPPLIED with this STEEL, and the DEMAND for it is RAPIDLY INCREASING.—For terms, apply to R. MUSSET and CO., Forest Steel Works, near Coleford, Gloucestershire.

CYANOGEN STEEL, CAST STEEL, SHEAR STEEL, and IMPROVED FOREST L. BLISTER STEEL supplied to order by ROBERT MUSSET and CO., Forest Steel Works, near Coleford, Gloucestershire.

Address to the Works, Coleford.

TO COAL OWNERS AND COKE BURNERS.

MACKWORTH'S PATENT COAL WASHER, OR PURIFIER.—This MACHINE will EXTRACT the HALE and ALL HEAVY IMPURITIES from SMALL COAL at a COST of TWOPENNY PER TON.

—For particulars and references, apply to the makers, A. and T. F. FAY, Temple-gate Works, Bristol; or to Mr. Jos. RIDER, Basinghall-street, Leeds.

WIRE-ROPE TESTING.

PUBLIC TEST of A. J. HUTCHINGS AND CO.'S PATENT WIRE-ROPE at LIVERPOOL, FEBRUARY 27, 1861.

[From the *Daily Post* of March

## THE MINING SHARE LIST.

## DIVIDEND MINES.

<i>Shares.</i>	<i>Mines.</i>	<i>Paid.</i>	<i>Last Pr.</i>	<i>Business.</i>	<i>Dividends Per Share.</i>	<i>Last Paid.</i>
4000 Bedford United (copper), Tavistock	2 8 8.	54	44 54	12 8 6.	1 6 —	Sept. 1861
240 Boscean (tin), St. Just	20 10 0.	60	—	35 10 0.	1 5 0	Dec. 1861
200 Botallack (tin, copper), St. Just	91 5 0.	240	240 250	448 50 0.	21 10 0	Feb. 1861
1000 Carr Bras (copper, tin), Illogan	16 0.	80	—	269 10 0.	2 0	Feb. 1861
2048 Carnyorth (tin), St. Just	3 10 0.	—	154	0 19 6.	2 0	Sept. 1860
200 Cefn Cwm Brynwo (lead), Cardigansh.	83 0.	33	—	9 0 0.	4 0	April 1861
50000 Connorree (copper, sulphur) fl. E. L.	1 0 0.	318 64.	318 64.	0 0 9.	0 0	Sept. 1860
2455 Cook's Kitchen (copper), Illogan	17 0.	89	294	28 28%	29 29%	—
12000 Copper Miners of England	25 0.	25	—	74	per cent.	Half-yrly.
350000 Ditto ditto (stock)	100 0.	24	—	1	per cent.	Half-yrly.
1855 Craddock Moor (copper), St. Cleer	8 0.	25	—	6 50 0.	0 7 0	Nov. 1861
887 Cwm Erbin (lead) Cardigansh.	7 18 0.	21	—	6 3 0.	0 15 0	Oct. 1861
128 Cwmystwyth (lead), Cardigansh.	60 0.	200	—	231 10 0.	4 0 0	Oct. 1861
280 Derwent Mines (sl. lead), Durham	300 0.	180	—	142 0.	0 5 0	June 1861
1024 Devon Gt. Com. (cop.), Tavist. [S.E.]	1 0 0.	375	—	360 370	774 0 0.	7 0 0 Nov. 1861
358 Dolcoath (copper, tin), Camborne	128 17 6.	550	—	648 10 0.	0 8 0	Dec. 1861
3000 Dwyngwyn (lead), Wales	12 6.	10	—	0 5 0.	0 2 6	Nov. 1861
512 East Bassett (cop.), Redruth [S.E.]	29 10 0.	65	55 60	93 0 0.	0 3 0	Nov. 1861
6144 East Cardigan (copper), St. Cleer [S.E.]	2 14 6.	28	27 34	28 28%	—	—
200 East Darren (lead), Cardigansh.	32 0.	45	—	78 10 0.	1 0 0	Oct. 1861
1400 Eynam Mining Co. (lead), Derbyshire	5 0 0.	—	—	20 3 4.	0 10 0	May, 1861
494 Fawley Consols (copper), Tywardreath	4 0 0.	5	—	41 9 3.	0 2 6	June 1861
2800 Foxdale (d. L.) [2580 £25 pd., 240 £15 pd.]	35	—	—	64 12 7.	1 12 0	Sept. 1861
6000 Frank Mills (lead), Devon	3 18 6.	454	—	0 14 0.	0 3 0	Sept. 1861
4000 Great South Tolpuddle [S.E.], Redruth	0 14 6.	454	—	7 12 6.	0 5 0	Feb. 1861
1788 Great Wheal Fortune, Bream	8 16 0.	13	—	1 0 0.	0 10 0	July, 1861
5908 Great Wh. Vor (tin, cop.), Helston [S.E.]	40 0 0.	7	616 7	1 12 6.	0 7 6	Sept. 1861
1024 Herodsfoot (d. lead), near Liskeard [S.E.]	8 10 0.	39	38 39	16 5 0.	1 15 0	Oct. 1861
1000 Hibernian Mine Company	92 6 2.	27 1	—	7 10 0.	0 18 0	Sept. 1861
1600 Lewant (copper, tin), St. Just	2 10 0.	95	—	1091 0 0.	0 5 0	May, 1861
4000 Lliburner (lead), Cardigansh., Wales	18 15 0.	110	—	377 10 0.	2 0 0	Oct. 1861
9000 Marke Valley (copper), Caradon	4 6 0.	10 1	10 1 10 1	1 6 0.	0 5 0	Oct. 1861
5000 Mendip Hills (lead) [L.], Somerset	8 18 0.	154	—	2 1 0.	0 2 6	May, 1861
1500 Minera Mining Co. [L.], Wrexham	26 0.	170	—	78 3 0.	3 2 3	Nov. 1861
20000 Mining Co. of Ireland (cop., lead, coal)	7 0.	154	—	14 7 11.	0 7 0	June 1861
640 Mount Pleasant (lead), Mold	4 0 0.	35	—	15 10 7.	1 5 0	Dec. 1861
6000 New Birch Tors and Vinter Consols	1 6 0.	214	—	0 3 6 0.	0 1 0	Sept. 1861
6000 North Downs (copper) Redruth	2 3 8.	58	4 5 8	0 9 6.	0 2 6	Aug. 1861
1386 North Grumbler, Redruth	2 7 6.	6	—	0 10 0.	0 10 0	Mar. 1861
6000 North Great Work, Bream	1 3 0.	14	—	0 2 0.	0 2 0	May, 1861
6000 Orsdded (lead), Flintshire	0 0 8.	154	—	0 8 1.	0 1 3	Nov. 1861
6400 Par Consols (cop.), St. Blazey [S.E.]	1 3 6.	734	73 73%	36 9 6.	0 8 0	Nov. 1861
200 Parys Mines (copper), Anglesey [L.]	50 0.	—	—	12 10 0.	2 10 0	Sept. 1861
2000 Phoenix (copper, tin), Linkinhorne	100 0.	435	—	449 10 0.	0 55 0	May, 1861
1772 Polberro (tin), St. Agnes	—	5	—	6 6.	0 5 0	May 1861
1120 Providence (tin), Uny Lelant [S.E.]	10 8 7.	41	39 40	61 15 0.	1 0 0	Nov. 1861
18 Rhosessor	50 0.	—	—	1250 0.	0 100 0	Quarterly
512 South Caradon (cop.), St. Cleer [S.E.]	1 5 0.	340	332 1 337 1%	361 0 0.	5 0 0	Nov. 1861
512 South Tolpuddle (cop.), Redruth, Cornwall	8 0.	45	45 47 1	103 10 0.	1 0 0	Nov. 1861
496 South Wheal Frances, Illogan [S.E.]	18 18 9.	90	95 100	357 5 0.	1 0 0	Nov. 1861
280 Speare Moor (tin, copper), St. Just	31 17 9.	45	—	9 15 0.	1 0 0	June 1861
910 St. Ives Consols (tin), St. Ives	8 0 0.	324	—	484 10 0.	0 10 0	Nov. 1861
9800 Tamor Can. [sl. id.], Beeralston [S.E.]	4 10 0.	134	—	5 6 0.	0 2 6	Jan. 1861
6000 Tincroft (cop., tin), Pool, Illogan [S.E.]	9 0 0.	8	73 8	10 18 6.	0 5 0	Dec. 1861
573 Trelyon Consols (tin), St. Ives	11 10 0.	16	—	7 0.	0 10 0	Sept. 1861
200 Trumpet Consols (tin), near Helston	57 10 0.	100	—	53 0 0.	1 0 0	Aug. 1861
1024 Wendron Consols (tin), Wendron	11 13 10.	104	104 104%	8 15 0.	1 0 0	Jan. 1861
6000 West Bassett (copper), Illogan [S.E.]	1 10 0.	14 12	14 15	22 0 0.	0 5 0	Sept. 1861
60 West Burton Gil (lead), Yorkshire	50 0.	—	—	14 10 10.	0 3 0	June 1861
1024 West Caradon (cop.), Liskeard [S.E.]	5 0 0.	53	50 52	99 11 3.	1 0 0	Nov. 1861
266 West Damsel (copper), Gwennap	37 0.	524	—	45 0.	0 1 0	May, 1861
6400 West Fowey Consol. (tin, copper)	7 10 0.	33	—	0 14 0.	0 2 0	May, 1861
400 W. Wh. Seton (cop.), Camborne [S.E.]	47 10 0.	306	290 300	322 0 0.	7 0 0	Oct. 1861
512 Wheal Bassett (copper), Illogan [S.E.]	5 2 8.	85	75 80	575 10 0.	2 0 0	Dec. 1861
264 Wheal Basset (copper), Redruth [S.E.]	8 0 0.	80	75 80	929 0 0.	2 0 0	May, 1861
2900 Wh. Clifford Amalgamated (cop.), Gwen. 30.	80 0.	31	31 32	26 0 0.	10 0	Oct. 1861
2000 Wheal Falmouth and Sperries	2 5 0.	8	—	0 10 0.	0 10 0	Feb. 1861
128 Wheal Friendship (copper), Devon	50 0.	90	—	2400 10 0.	5 0 0	Feb. 1861
512 Wheal Jane (silver-lead), Ken.	3 10 0.	19	—	11 10 0.	1 0 0	Oct. 1861
1024 Wheal Kitty (tin), Uny Lelant [S.E.]	1 7 2.	61	—	8 0 0.	0 10 0	Sept. 1861
4800 Wheal Luncott (lead), St. Ives	2 10 8.	24	24 24%	1 12 0.	0 4 0	Oct. 1861
896 Wh. Margaret (tin), Uny Lel. [S.E.]	9 17 6.	44	—	70 0 0.	1 0 0	Nov. 1861
100 Wheal Mary (tin), Lelant	35 2 6.	440	—	280 5 0.	7 0 0	June 1861
1024 Wh. Mary Ann (d.), Meneston [S.E.]	8 0 0.	17	16 17 x d.	54 17 6.	0 10 0	Dec. 1861
80 Wheal Owles, St. Just, Cornwall	70 0.	300	—	288 13 0.	5 0 0	Nov. 1861
394 Wheal Seton (tin, copper), Camborne	58 10 0.	130	128 130 x d.	123 5 0.	1 10 0	Dec. 1861
500000 Wicklow (copper) [L.], Wicklow	0 0 0.	58 54	54 54%	43 17 6.	2 0 0	Oct. 1861

[ Dividends paid every two months.  Dividends paid every three months.]

Dividends paid every three months.)

**MINES WITH DIVIDENDS IN ABEYANCE.**

100	Aberdovey (silver-lead), Merioneth.	19	10	0..	30	..	..	20	10	0..	0	10	0..	Mar.	
5120	Alfred Consols (cop.), Phillack [S.E.]	3	3	6..	14..	..	14s. 15s.	..	30	3	0..	0	2	6..	April.
1624	Balewiddien (tin), St. Just.	11	15	0..	12	..		12	5	0..	0	5	0..	April.	
1204	Brightside & Froggatt Grove, Derbysh.	3	0..	0..	3..	4..		3	0..	0..	3	0..	0..	April.	
206	Bryndaf Hall (lead), Flintshire.	18	10	0..	25	..		14	0	0..	2	10	0..	Oct.	
2500	Central Minera (lead) [L. £5..]	15	0..	0..	5..	4..		0	4	0..	0..	4	0..	Sept.	
6000	Charlotte United, Perranuthnoe	2	13	2..	21..	..	21s.	..	13	0..	0..	1	6..	Sept.	
2000	Callicombe (copper), Lamerston	5	5	0..	12	..		3	5	0..	0..	8	0..	Dec.	
256	Condurrow (cop., tin), Camborne.	20	0..	0..	60	..	55	60	85	0..	0..	2	0..	June.	
2000	Copper Hill (copper) Redruth	48	0..	0..	110	..	97% 102%	..	20	10	0..	2	10	0..	Sept.
4076	Devon and Cornwall (copper)	5	6	3..	8	..		10	0..	0..	2	6	2..	Feb.	
672	Ding Dong (tin), Gulval.	39	2	6..	15	..		16	7	6..	1..	10	0..	Mar.	
12000	Drake Wails (tin, copper), Calstock.	2	1	0..	1	..	18s. 20s.	..	13	6..	0..	2	9..	Sept.	
2045	East Falmouth (sil.-id.), Kenwyn, Pen.	5	0..	0..	3..	4..		0	7	6..	0..	2	6..	Jan.	
138	East Pool (tin, copper), Pool, Illogan.	24	5	0..	240	..		305	0..	0..	2	10	0..	Aug.	
2045	East Wheal Lovell (tin), Wendron.	2	18	6..	—	—		0	5	0..	0..	5	0..	July.	
6000	General Mining Co. for Ireld. (cop., id.)	4	0..	0..	5..	5..	5% 5%	1	8	0..	0..	3	3..	June.	
480	Grambler and St. Aubyn (cop.) [S.E.]	48	19	0..	20	..	20	18	20	23	0..	0..	1	0..	July.
119	Great Worst (tin), Germoe.	—	100	0..	0..	110	..		221	10	0..	7	10..	Feb.	
200	Herward United (lead), Flintshire.	40	0..	0..	10	..		3	0..	0..	1	10	0..	July.	
6000	Hington Down Con. (cop.), Cals. [S.E.]	4	19	0..	4	..	3% 4	2	16	0..	0..	2	6..	Nov.	
5000	Kelly Bray (lead, copper), Callington.	4	8	0..	21..	..		0	6	0..	0..	2	0..	Sept.	
20	Laxey Mining Company, Isle of Man.	100	0..	0..	1200	..		1420	0..	0..	50	0..	0..	June.	
470	Newtownards Mining Co., Co. Down.	50	0..	0..	35	..		56	0..	0..	1	0..	0..	Sept.	
700	North Rosekar (copper), Camborne.	18	0..	0..	16	..	18 20	..	157	0..	0..	4	0..	Sept.	
512	Rosewarne United (cop., tin), Gwinear.	19	6	4..	20	..		33	10	0..	1	0..	0..	Sept.	
1200	Sortridge Con. (cop.), Whitechurch [S.E.]	16	0..	0..	13..	..	13s. 14s.	..	10	0..	0..	2	6..	July.	
128	South Crimlough (copper), St. Austell.	19	0..	0..	285	..		60	0..	0..	20	0..	0..	June.	
2000	St. Day United (tin and cop.), Redruth	2	7	0..	—	—		0	3	6..	0..	1	0..	Feb.	
6000	Tolvaiddon (copper), Marazion	—	6	0..	—	—		0	13	6..	0..	3	0..	Mar.	
2000	Way of Towy (lead), Carmarthen [S.E.]	13	6..	0..	—	—		0	5	9..	0..	1	0..	July.	
1024	West Providence (tin), St. Erth	16	15	0..	3..	4..		33	1	9..	0..	10	0..	April.	
240	Wheat Bal (tin), St. Just.	15	0..	0..	16..	..		4	0..	0..	1	0..	0..	Feb.	
4096	Wheat Edward (cop.), Calstock [S.E.]	7	7..	6..	3..	4..	3% 3%	0	5	0..	0..	5	0..	Mar.	
1024	Wheat Grylls (tin), Perranuthnoe	2	4	0..	16..	..	14 14%	1	12	0..	0..	7	6..	Nov.	
5000	Wheat Kitty (tin), St. Agnes	4	16	6..	1..			0	18	6..	0..	2	0..	July.	
845	Wheat Lovel (tin), Wendron	33	0..	0..	7..	..		31	0..	0..	1	0..	0..	Sept.	
1024	Wheat Margery (tin, copper)	15	13	0..	9..	..		0	10	0..	0..	10	0..	May.	
1040	Wheal Trelewmyne (tin, cop.), Gwinear.	5	17	0..	17..	..	16 17	..	43	16	0..	1..	0..	Oct.	
1022	Wheal Trelewmyne (tin, cop.), Gwinear.	13	2	6..	5..	..		10	2	6..	0..	7	6..	Jan.	

## FOREIGN MINES

FOREIGN MINES.										
2484	Burra Burra (cop.), South Australia	5	0 ..	116 ..	..	265	0 ..	5	0 ..June, 18	
12000	Cobre Copper Co. (cop.), Cuba	[S.E.]	40	0 ..	37 ..	35	37	97	12 .. 1 .. 0 ..July, 18	
10000	Copilao Mining Company, Chile	[S.E.]	16	0 ..	8 ..	..	6	8 ..	0 .. 5 .. 0 ..Jan., 18	
16000	East Indian Coal, Calcutta	[L.]	10	0 ..	10 ..	..	74	per cent.	.. Yearly	
70000	English and Australian	[S.E.]	..	5 ..	3 1/4 ..	..	1	5 .. 0 ..	0 .. 2 .. 6 ..Aug., 18	
25000	Gen. Mining Assoc., Nova Scotia	[S.E.]	30	0 ..	24 ..	..	18	5 .. 0 ..	1 .. 0 ..June, 18	
68000	Kapunda Mining Co., Australia	[S.E.]	1	0 ..	2 1/2 ..	..	0	8 .. 0 ..	0 .. 2 .. 0 ..June, 18	
15000	Linares (Id.), Pozo Ancho, Spain	[S.E.]	3	0 ..	8 ..	..	8	6 .. 2 ..	0 .. 3 .. 4 ..July, 18	
10000	Lusitanian (of Portugal)	[S.E.]	..	2 ..	0 ..	24 ..	..	18	9 .. 0 ..	1 .. 6 ..Aug., 18
105815	Marquita and New Granada	[S.E.]	1	0 ..	5 ..	..	..	9	6 .. 0 ..	0 .. 1 ..July, 18
160000	Port Phillip (gold), Clunes	[S.E.]	..	1 ..	0 ..	13 1/2 .. 13 1/2 .. 15 1/2 ..	..	0	4 .. 0 ..	0 .. 1 .. 0 ..July, 18
11000	St. John del Rey [L.], Brazil	[S.E.]	15	0 ..	49 ..	45 49 ..	..	43	5 .. 0 ..	2 .. 10 .. 0 ..June, 18
20000	West Canada Mining Company	[L.]	1	0 ..	1 ..	..	..	0	3 .. 0 ..	0 .. 2 .. 0 ..June, 18

**FOREIGN MINES WITH DIVIDENDS IN ARREARAGE.**

FOREIGN MINES WITH DIVIDENDS IN ABEYANCE.						
10000	Alten and Quenangen Uni. (cop.)	[L. £2]	4	10	90..	3
10000	Gt. Barrier Land. Min. Acc. No. Z.	[L. £2]	4	10	90..	3½
10000	Pontzbaud (All. Min.)	[Fr. £1]	90	00	00	15 per cent.

all.), Mexico [S.E.] Av. 28 5 0.. 8 1/2.. 7 1/2 7 1/2 .. 1 16

NON-DIVIDEND FOREIGN MINES.							
<i>Shares.</i>	<i>Mines.</i>	<i>Paid.</i>	<i>Last Pr.</i>	<i>Bus. done.</i>	<i>Last C.</i>	<i>Sept.</i>	<i>18</i>
20000 Australian (copper), South Australia [S.E.]		7 7 6	..	1	..	Sept.	18
75000 Bon Accord, South Australia (copper) [L. £1] [S.E.]		0 17 6	..	1/4 .. 5/8 3/4	..	Dec.	18
6000 Central American (silver) [L. £1]		5 0 0	..	12 ..	..	Feb.	18
17000 Central Italian (copper) [7000 £2 paid]		0 5 0	..	..	..	Jan.	18
60000 Clarendon Consols (copper), Jamaica [S.E.]		0 17 6	..	5/8 ..	..	Jan.	18
10000 Copiapo Smelting [L.], Chile		10 0 0	..	8/4 ..	..	Fully pa	
75000 Dun Mountain (copper), New Zealand [L.] [S.E.]		1 0 0	..	1/4 .. 7/8 1/2	..	Fully pa	
25000 East del Rey, Brazil [L. £3]		1 0 0	..	1/4 .. 1/2 1/2	..	Sept.	18
30000 East Kongsvinger Native Silver Mining Co. of Norway [L. £5]		1 0 0	..	3/4 ..	..	April	18
80000 Ellerslie and Bardowie, Jamaica		0 15 0	..	1/4 ..	..	July	18
8000 English and Canadian Mining Company [L.]		5 0 0	..	..	..	Fully pa	
250000 Fortuna (lead), Spain [L.] [S.E.]		2 0 0	..	2/4 ..	..	Fully pa	
80000 Great Northern (copper), South Australia [L. £2] [S.E.]		1 0 0	..	1/2 .. 13/8 1/2	..	..	
4000 Hope Silver-Lead and Copper Mining Co. [L.], Jamaica		25 0 0	..	..	..	Fully pa	
50000 Imperial Thessalian (lead, &c.), Thessaly [L. £2]		0 10 0	..	3/4 ..	..	June	18
30000 Lagunazo (sulphur, copper), Portugal [L. £1]		0 15 0	..	1/4 ..	..	Dec.	18
60000 New Granada (gold), South America [S.E.]		1 0 0	..	..	..	Fully pa	
10000 New Grand Duchy of Baden (silver-lead), near Freiburg		1 0 0	..	1 ..	..	Nov.	18
60000 North Rhine Copper of South Australia [L. £1] [S.E.]		0 15 0	..	5/8 .. 1/2 ..	..	..	
15000 Pachuca Silver Mining Company, Mexico [L. £1]		0 10 0	..	..	..	April	18
80000 Scottish Australian Mining Company [L. £1]		0 10 0	..	1/2 .. 13/8 1/2	..	Nov.	18
15000 South Europe Mining Company, Spain [L. £5]		3 0 0	..	..	..	May	18
50000 St. John's United (copper, lead), Newfoundland [L.]		1 0 0	..	5/8 ..	..	Fully pa	
45000 Victor Emmanuel, Italy [L.] [30,000 Fr. Pre. Shares, 64. per. 25,000 £1 pd.]		..	..	..	..	..	
1000 Western Africa Malaitsche (copper) [L.]		110 0	..	1/2 ..	..	Oct.	18
12000 Wheat Elen, South Australia [L. £5]		4 0 0	..	4/4 ..	..	July	18
32425 Wheat-Jamaica (copper)		1 0 0	..	1/4 ..	..	Fully pa	
30000 Worthing (copper), South Australia [L.] [S.E.]		1 0 0	..	1/4 ..	..	Fully pa	

## PROGRESSIVE MINES.

— These names with [S. L. L.] appended have been admitted on the basis of Successor Liability.

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